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BALTIMORE, FEBRUARY 16, 1911.

President Eugene P. Thomas of the
United States Steel Products Co. writes
to the MANUFACTURERS RECORD:

The MANUFACTURERS RECORD is a valuable
exponent of Southern progress and industry,
and your work for the South is generally
and properly recognized.

CEMENT IN THE SOUTH.

This week's cement show at Chicago
directs attention again to the notable
and widely influencing growth of the
Portland-cement industry in this coun-
try and, to some extent, to the contri-
bution of the South to that growth.
Twenty years ago the Portland-cement
industry represented an annual output
of less than 455,000 barrels valued at
less than \$1,000,000. Last year the out-
put was between 73,000,000 and 75,000,-
000 barrels with a value of something
like \$61,000,000. The growth by years
since 1890 is shown in the following
table:

Years.	Barrels.	Value.
1890.....	335,500	\$704,050
1891.....	454,813	967,429
1892.....	547,440	1,153,600
1893.....	590,652	1,158,138
1894.....	798,757	1,383,473
1895.....	890,324	1,586,830
1896.....	1,543,023	2,424,011
1897.....	2,677,775	4,315,891
1898.....	3,692,284	5,970,773
1899.....	5,652,266	8,074,371
1900.....	8,482,020	9,280,525
1901.....	12,711,225	12,532,360
1902.....	17,230,644	20,864,078
1903.....	22,342,973	27,713,319
1904.....	26,505,881	33,355,119
1905.....	35,246,812	33,245,867
1906.....	46,463,424	52,466,186
1907.....	48,785,590	55,992,551
1908.....	51,072,912	45,547,679
1909.....	62,508,461	50,510,385
1910.....	*74,000,000	*61,000,000

*Estimated.

Expansion in this industry has come
about through a greater and greater
appreciation of the uses to which ce-
ment can be put. Though the dawning
of the day of reinforced concrete in

many capacities appears in the swelling
of annual production from 1,543,023
barrels in 1896 to 12,700,000 barrels in
1901 and to 74,000,000 barrels in 1910,
it is really only the beginning of the
dawning and the possibilities of the
future are emphasized by such exhibi-
tions as that at Chicago.

Building is, of course, going on in all
parts of the country, and in some parts
on larger scale than in others. But in
respect to cement the South has, per-
haps, an advantage over sections more
closely built and longer engaged in pub-
lic improvements of divers kinds. One
of the advantages that it has in the
cotton industry is the fact that builders
of mills have the benefit of experience
in other parts of the country in reach-
ing out for the latest and the best in
mill construction, and the machinery to
be installed is pretty certain to be of
the most approved design. So, in con-
struction operations of other kinds the
South can avail itself of the latest in
the use of cement and should be ex-
pected to become a cement section in
many particulars. Already, as is clearly
pointed out on another page of this
issue, the railroads have found the ma-
terial of immense value for tunnel
work, docks, culverts, viaducts, etc.;
the farmers are using it for silos, fence-
posts, barn fixtures, corn cribs and for
other purposes where cleanliness and
security from rats and other damage
are desired; homes, public buildings,
warehouses, office buildings, school-
houses, streets and other highways,
sewers and reservoirs are calling more
and more for cement. Other materials,
either in combination with cement or
independent of it, will be used as heret-
ofore. But the dawn of the cement
day was coincident with the develop-
ment of a feeling that the day of some
other material might be limited did not
some reinforcement come. That has
been given in cement.

LIVING AT HOME.

In spite of the development in the
South generally of the revival of the
policy of diversification in agriculture,
many individual farmers have not yet
learned the valuable lesson of living at
home. Commissioner of Agriculture
E. J. Watson of South Carolina has
published recently an estimate that the
farmers of that State sent outside the
State last year more than \$68,000,000
for products that can be raised at home,
including \$20,000,000 for flour, \$15,000,-
000 for hog products, \$12,000,000 for
dairy products, \$11,350,000 for horses
and mules, \$6,000,000 for corn, \$2,000,-
000 for hay and \$1,000,000 for oats. It
is estimated that Texas sends annually
to California and Eastern States \$5,000,-
000 for canned goods while thousands
of bushels of peaches, tomatoes and
other fruit and vegetables go to waste
on Texas farms. For butter alone
Arkansas spends \$600,000 annually in
other States, according to another state-
ment. These are typical suggestions
of a situation that is confined to no

State and to no locality in a State. It
is a situation that must be changed if
the South is to come into its full own
agriculturally.

In many cases it may be more profit-
able for the farmer to devote the best
of his energies to a specialty, truck
growing, fruit culture, cotton raising or
grain production. Circumstances may
be against his following any other
course. But there is always the possi-
bility that weather conditions may mar
his money crop or that the market may
be against him. That is the possibility
before farmers everywhere. But there
are few circumstances forbidding the
farmer assuring himself of a full gar-
den supply of vegetables and of an ade-
quate stock of hog meat and hominy.
If he has them he is rather independent
of the market as to his money crop.
Whatever the latter yields it is just so
much more in the pocket of the farmer
if he has reduced the expense of mak-
ing the crop by providing his own food-
stuffs, and should there be a crop fail-
ure, as may happen at times, he is saved
from the burden of buying his food on
credit.

FOREIGN PRAISE OF OUR RAIL- ROADS.

W. M. Acworth of London, an author-
ity upon railroad economies, whose
name and writings have been more or
less familiar to students of transporta-
tion affairs for twenty years or more,
lately returned home after a visit of
two months in this country, during
which he traveled considerably, paying
particular attention to our railroads
and their environment, commercial,
agricultural, industrial, financial and
political. Upon the eve of his departure
he expressed himself freely concerning
what he had learned during his stay in
America. What he said is more than
ordinarily interesting because, being
from another country remote from ours,
his views may be regarded as being
about as nearly uninfluenced by thought
here on either side of the railroad ques-
tion as possible for them to be.

As for our railroads and their service,
he says they are first in the world in
actual economy. In obtaining the great-
est amount of result for each unit of
expenditure they are unequalled any-
where. He also says that to meet the
requirements of expanding traffic their
facilities must be increased at least 50
per cent, every ten years. Traffic sub-
stantially doubles every decade. More-
over, the people generally must under-
stand that the money to provide the in-
crease of facilities cannot be obtained at
home or in the United States. In large
measure it must be raised abroad for a
long time, but investors will not be will-
ing to subscribe it while harassing con-
ditions continue to hamper the railroads
in revenue, administration and develop-
ment. American railways have reached
a higher standard than either American
farmers or American government if
comparison be made with the railroads,
the farmers and the governments re-

spectively of some great countries, Ger-
many for instance.

But Mr. Acworth also criticized our
railroad companies for their centraliza-
tion of their administrative authority
principally in either New York or Chi-
cago. While this doubtless conduced to
efficiency and economy, it was respon-
sible in part for the strained relations
between the roads and the people. He
suggested that local railroad officials at
important points be given authority to
settle on the spot local questions that
are now referred to headquarters a
thousand or more miles away. Fur-
thermore, the ranking officials should
visit the cities on their lines and become
acquainted with the citizens. The rail-
roads should also let the public see that
they have nothing to conceal; that
there are now no skeletons in the closet.

This English critic's utterances about
the assaults upon the railroads is fa-
miliar to all of us, but his remarks upon
administrative methods are new. Doubt-
less, being accustomed to railway con-
ditions abroad and with distances small
as compared with ours, the reference of
questions to headquarters for decision
impressed him as like sending to an-
other country. But there is much in
what he says about prompt decisions
upon disputes between the railroads
and the shippers, especially when they
relate to damage claims. Much ill-feel-
ing has been caused by tedious processes
in the settlement of such losses, and it
is agreeable to remember that some of
the lines have endeavored to remedy
defects in this respect and to make
prompt settlements in all cases, espe-
cially in those carrying no doubt as to
the liability of the roads. In other
ways also various companies are doing
much to make their dealings with the
public altogether pleasant and satisfac-
tory. Undoubtedly the continuance of
this policy will contribute greatly to the
establishment and preservation of har-
monious relations between the people
and the railroads, avoiding incidentally
the creation of opportunities for trouble-
makers to stir up strife.

UTILIZATION OF WASTES.

Shifting of the situs of the iron in-
dustry in this country and revolution in
the processes of iron-making in the past
half a century were strikingly empha-
sized a few years ago when there came
a sudden and sharp demand for pig-
iron. Up to that time there had been
in different States great masses here
and there, in many cases overgrown
with well-developed trees, the sole me-
morials of furnaces of the ancient type.
These masses were the slag heaps, the
refuse of the primitive days. But it
was discovered that they contained con-
siderable iron that the old processes
had failed to gain. About the time that
the recovery of that waste was felt to
be economic modern slag was coming
into use in the manufacture of cement,
and the wastes of other kinds in the
iron industry were being turned to good
account. The era of the by-product

had already come, notably as to cottonseed, the basis of an industry grown in forty years from practically nothing to one representing an annual output of \$100,000,000; as to slaughter-house products, and as to the petroleum industry. The realization that many wastes may become valuable by-products, if not main products, is sinking deeper and deeper into the practical American mind. The knowledge that there is great gain to be had in mining coal, for instance, upon an economic plan and in handling other so-called "raw" materials so as to make the most of them and the widespread interest in methods for reclaiming fertile lands through drainage or for turning a desert into a garden through irrigation are all phases of the movement for the utilization of wastes.

Comparatively little progress, however, has been made in this particular in handling forest products, representing an annual output of at least \$1,000,000,000. But a beginning has been made in more than one direction. Paper is made from pine shavings, the value of stumps left in cut-over pine lands is appreciated much more than formerly, and discovery has been made that tree tops, slabs, shavings and sawdust are too valuable to be used merely for fuel. The commercial importance of these former wastes was shown about two years ago by Mr. G. U. Borde, an engineer of New Orleans, in an article in the MANUFACTURERS RECORD. The frequent calls that have been made for that article since then indicates clearly that thinking men connected more or less closely with the lumber industry are giving the subject careful study. Mr. Borde's article dealt at some length with the derivation of ethyl alcohol and other things of commercial value from the "wastes" of lumbering. Discussing a process that he had observed in France, he said:

The process used is the one discovered by Dr. Alexander Classen of the Polytechnic School of Aachen, Aix-la-Chapelle, Germany, in 1900. He found that he could convert the cellulose existing in all woody fiber into a fermentable sugar by cooking the wood under pressure in the presence of sulphurous acid, and by fermenting the sugar thus formed obtain ethyl alcohol. This process he patented all over the world, but his original methods were crude, and the French people, after having purchased the patent rights for France, set to work to develop the process commercially. They changed the design of the apparatus suggested by him for the conversion, and in further experimenting found that, in addition to the sugars formed, a paying quantity of acetic acid was created at the same time, and in their process they have made arrangements to extract the acetic acid as well as the alcohol.

At St. Marcel I found one of their plants in the course of construction, and they kindly turned the same over to me for experimenting. There had been shipped from the South 20 tons of cypress shavings and 20 tons of long-leaf pine sawdust, and from Chicago 20 tons of mixed hardwoods. While I said the plant was in course of construction, enough of the apparatus was there to carry the process through successfully, but enough of the plant was missing to prevent me from getting an absolutely accurate estimate of their cost of manufacture.

It makes practically no difference what kind of wood is used for the manufacture of alcohol, as all yield the same amount of alcohol per ton of wood. Oak, however, on account of the excessive amount of tannic acid which it contains, and which is a foe to fermentation, has to go through an additional treatment for the elimination of the tannic acid before it can be fermented and its sugars converted into alcohol.

In a general way the process in this plant is as follows:

The sawdust, which is drawn from a radius of 75 miles from the plant, is put into a digester, and a predetermined amount of water and sulphurous acid is added. The digester is closed and sealed. External heat is applied until the pressure inside reaches about 100 pounds, and is kept at this pres-

sure for a certain length of time, during which the cellulose in the wood is converted into dextrine and other sugars. The heat is then cut off and the usual sulphuric acid, which has been put into the digester simply to get the pressure to the required point, is reclaimed. The material in the digester, which has shrunk about 25 per cent., is then passed over to the separator, in which the acetic acid formed during the conversion is vaporized by means of a steam jet and then collected. The converted sawdust is then brought over to the mash tanks, where its acidity is neutralized, and is made into a mash which is fermented and distilled in the same way that an ordinary grain mash is handled in a whiskey distillery.

The tallings from the still are first compressed to extract the water, and the final amount of moisture is taken out in a drier heated by waste gases from the boilers. These dry tallings in France and England are made into stock feed or brickettes, or by the addition of a small amount of magnesia are compressed into an artificial fireproof stone which has a crushing strength of 18,000 pounds per square inch and a tensile strength of 6000 pounds.

Other experiments are being carried on at present for further results from these tallings, and while not at liberty to make public what these experiments are, I venture to predict that there is a good deal more in the tallings than has so far been gotten out of them. The results obtained from the wood shipped from America were as follows:

For every 3200 pounds of green refuse, which contains about 30 per cent. moisture and is the equivalent of one long ton of theoretically dry wood, I obtained 21½ gallons of 188-degree proof alcohol, which is the equivalent of 33.6 gallons of proof alcohol. By experiment in the laboratory we found that this yield should have been about 10 per cent. higher, which loss was probably due to our inexperience in handling the apparatus.

In addition thereto will be obtained 76 pounds of acetic acid and three-quarters of a ton of refuse, which the English and the French people are manufacturing into stock food.

The French chemist of the concern claims that under proper manipulation of the apparatus, and when everything is in working order, they do from their wood, and we should from our wood, obtain 30 gallons of alcohol per ton of sawdust.

It is estimated that for every ton of theoretically dry wood, or, in other words, for every 3200 pounds of green sawdust, one should obtain:

30 gallons of 188-degree alcohol at 40 cents.....	\$12 00
76 pounds of acetic acid at 6 cents.....	4 56
¾ ton of stock food at \$23.....	17 25
Which, less estimated cost of production.....	\$33 81

Nets..... \$26 81
which, if one takes into consideration that 1000 feet board measure of green lumber is the equivalent of one and one-quarter long tons of theoretically dry wood, would make the net return per 1000 feet board measure \$33.51.

This to the skeptic may sound like a wild dream, but the facts given in this article are based upon actual observation. Some people who have had occasion to look into this matter further have determined to go ahead and erect plants for the manufacture of wood waste into alcohol, acetic acid and stock food, and I am at present designing one plant to be erected in Hadlock, Washington, having a capacity of 50 tons of sawdust per day, and one to be erected in Ontario, Canada, having a capacity of 100 tons of sawdust per day. These plants I hope to have in operation by the first of the year, and the day will then not be far distant when it will pay the sawmill owners to go more deeply into the question of economy of waste material in the woods, as well as waste of power in the plant.

Because of the general attention that is being given to this subject, and because of the vast possibilities in this field in the South now cutting more than half of the 45,000,000,000 feet cut in the country annually, we have reproduced this description as one of the best incentives to a maintenance of undertakings already established for the utilization of the castaways of the lumber industry and to an expansion in the comparatively new industries of the kind so that nothing shall escape, from the stump to the sawdust, in bringing the value of the by-products certainly as close to the value of the main output

as the value of cottonseed products has been brought to the value of the cotton.

THE NOSE OF A CAMEL.

When objection was made on last Saturday to the consideration at that time of the bill to incorporate the Carnegie Endowment for International Peace, Senator Root, in charge of the bill, said:

I yield, but it is a bill which relates to a very great benefaction, to something which is greatly to the public interest and in the interest of the world.

And Senator Gallinger, who has care of the bill for the incorporation of the Rockefeller Foundation, said:

I have in charge a bill on the calendar which is somewhat similar, and it has been very seriously objected to on grounds, I think, that will bring this bill in the same category.

What the objections are does not appear in the official report of this colloquy. But a newspaper report, probably more illuminating, states that the objection is to the use of any individual's name in connection with such incorporation. That, however, is among the slightest objections to the bills in charge of Senators Root and Gallinger mentioned in this episode. Already there have been too close relations between the Government and great "benefactions." There has been too much incorporation by Congress of enterprises with which the National Government should have nothing to do. Precedents thus set are dangerous precedents. Their influence cannot be overcome by increasing them. A stop should be put to all of them. The Root-Gallinger episode of Saturday is valuable in directing attention of the country to the two measures which ought not to pass. There is danger that in the bustle and confusion of the closing weeks of this Congress such measures may get through unperceived as should not be handled finally without the freest and most open discussion, untrammelled by attempts to influence the country, upon extraneous lines, against opponents. Once upon a time a camel meekly begged a man to permit it to place only its nose beneath the flap of his tent. The man, good-natured and unthinking, and taking the camel at its face value, consented. The camel's nose once inside was followed by the front legs and the shoulders. The man's protests were then in vain, and he was helpless when the camel walked off with the tent upon his back.

Too many camels have their noses under the Government tent at Washington.

COMPREHENSIVE HIGHWAY PLANS IN THE SOUTH.

When all the projects for highways in Southern States looking to something greater than mere county or other local improvement have become facts, the South will offer to the tourist delights unsurpassed in any other section and good roads in all parts will be the normal. North Carolina is considering the creation of a State road commission, but it is not waiting for the benefits to come from such a body of officials. Its leadership in the movement for a system of highways on the crest of the Appalachians, having within its scope three or four States, is an expression of the same instinct that gave Mecklenburg county the position of a pioneer in road improvement. That mountain crest system will be bound to become a link in another system, having in North Carolina a great road from

tidewater to the west; in South Carolina, Georgia and on into Florida the sections of the New York-Atlanta, or Capitol-to-Capitol route, the across-State road in Tennessee and other planned highways.

One of the boldest thoughts is that of a continuous road from tidewater on Hampton Roads to Richmond, which joins with that of the Richmond, Louisa and Gordonsville Highway Association just organized to further the building of a boulevard from Virginia's capital city to the Piedmont section, where connection will be had with another fine road to be carried across the Blue Ridge into the Shenandoah Valley and with the improved roads leading to Washington city. Maryland is making steady progress under State auspices and locally, and its system of improved roads may well fit into the plan to restore the old prestige of the National Road extending into Ohio, Indiana and Illinois. Another historic way, the Wilderness Road, from Boonesboro, Kentucky, into Virginia and Tennessee, is receiving attention from the road-planners. Some day there will be a boulevard along the Gulf coast from Florida to Texas. It will meet the New Orleans-San Antonio highway, and a system of roads in Louisiana and Arkansas and a splendid equipment in Texas, promised even now in the probability of an expenditure during the coming year of \$25,000,000 in that State for good roads.

The program before the South, if that section is to live up to the promise in the well-thought out plans for these cross-State and inter-State highways, and in the bond issues and other provisions upon a liberal scale for intra-State roads, is suggested in a recent report of the State Highway Commission of New York. But a couple of years ago an issue of \$50,000,000 of bonds was authorized for road improvement in that State. About one-third of the amount has been issued, but the commission is asking for an additional issue of \$40,000,000 to bring the road system of the State near perfection. Bearing upon this question is the statement attributed to Nelson P. Lewis, chief engineer of the Board of Estimate of Manhattan, to the effect that there must be much rebuilding of roads everywhere. He is quoted as follows:

No roads anywhere, except those newly built according to some of these more modern processes, are able to withstand automobile traffic. When vehicles were drawn by horses the only damage done to the roads was by the horseshoes. The drawn vehicle was a benefit to the road, having the effect of a steam roller in packing and hardening the sand and clay.

It was thought at first that the automobile would be an improvement, with the tear of the horse removed, but with the great extension of the use of automobiles it was discovered that no road, except the hard asphalt of the city, could withstand them. Then the reason of it was soon worked out. In place of a vehicle to be drawn, we had put a locomotive on our roads. Needless to say, the locomotive is not drawn; it is driven. The two rear wheels on the automobile are identical with the driving wheels of a railroad engine.

When a railroad bed needs ballast, when the rails sag, it is not for the cars that go over the rails, but for the grind of the locomotive drive wheels. That is like a grip which, torn loose as the locomotive is forced forward, brings with it whatever is loose in dust and particles and scatters it to the winds. On the railroad bed, heavy steel is laid for the grind of the locomotive drive wheels, but on the highways there is nothing against the highway locomotive except water-bound loose rock, stone dust or grit. The clutch loosens the filling as the water dries, and the clouds of dust, enveloping the speeding automobile, are the road binding going out, leaving the road behind out of repair.

Everywhere the cry of bad roads is going

up. We are no worse off than the rest of the world. It is a problem which now engages the serious attention of the French Government, and England, which spent a hundred years in making her splendid highways, is now rebuilding them as fast as she can to accommodate them to new conditions.

These statements agree with the comment of the State Highway Commission:

"Owing to the enormous increase in motor vehicle traffic during the few years prior to 1900," the report goes on, "it had become evident that the ordinary methods in use for the construction and maintenance of macadamized roads were inadequate, and that a different method must be adopted to secure permanent results, and therefore it was necessary to experiment with bituminous materials, to reconstruct roads which had deteriorated, to establish a system of patrol and to locate State routes tentatively described in the highway law which are designed to form through macadam highways intersecting the State in all directions and comprising a total of upward of 3900 miles in length."

It is well for the South to have the experience of older States before it. Road-building in that section is, in many instances, from the ground up. There has been marked advance in the past five or ten years, but, for the full enjoyment of all that good roads mean, a vast amount of road construction is yet to be done. The best engineering talent should be employed in carrying on such construction and the best materials should be used. That is dictated by intelligence.

TO SOLVE IMMIGRATION PROBLEMS.

The argument that steamship lines operating between this country and Europe are beyond the purview of the Government in some cases because they are alien-owned may be easily answered by an act of a determined Congress. An act of Congress placing for 10 years a head tax of \$100 each upon foreigners immigrating to this country would be pretty sure to bring to taw the managements of foreign-owned steamship lines and induce other much-needed relief for the people of the United States.

It would inform governments of two or three foreign countries that the United States does not exist for the purpose of solving easily and cheaply their social problems; that the United States is not to continue to be the dump for the undesirables of other lands, even though steamship companies may thereby lose special advantages or the gain from transportation of the undesirables.

It will inform foreign organizations working upon racial or ecclesiastical lines that they must confine their operations to their home land, and that it is time to draw the line against the influence of race or ecclesiasticism in American public affairs, a pernicious influence in any circumstances, no matter how one may sympathize with men of all races in their aspirations or recognize the benefits of religion.

It will be a notice to the diplomatic representatives of foreign governments in this country that attempts on their part, no matter how covert, to create a public opinion here favorable to the plans of their home governments for the deportation of surplus menacing populations to the United States are impertinences to be sharply resented.

It will remove the reason for being of aggregations in New York seeking to remove restrictions upon immigration and sporadic movements to the same end under the guise of "Southern" parliaments, congresses and conventions.

It will give this country a chance to recuperate from the indisposition due

to the practically unrestrained influx of undesirable and unassimilable immigrants of the past ten years manifest in the terrible ulcers upon the body politic at such points as New York, where the greatest congestion has happened, and where the evil is so intense as to blind the public mind to the significance of pleas that it should be intensified by scattering it broadcast over the country, instead of being abated.

To be sure, such pleas are advanced because of their expected effect upon politicians, who depend upon class, race or ecclesiastical massing to keep themselves in power. But there is a sufficient number of citizens of the United States, whether of five or six generations of life in America or of but a few years' residence here, to handle such politicians as they deserve to be handled. The strength of the United States lies in administration of the Government through the properly-constituted authorities representing the people of this country. The authorities, of high or low degree, are unfaithful to the trust committed to them whenever they permit, under the influence of political ambition, alien factors to sway their judgment or control their conduct.

CROSSTIES.

Railroads of the country are spending more than \$60,000,000 annually for crossties. Purchases of the kind are at times an index to activity in railroad construction work. In illustration are the figures of crossties purchased in the years 1907, 1908 and 1909. The total number purchased in 1907 was 153,703,000. In the next year, following the depression in financial affairs, the purchases fell to 112,466,000, but with returning vitality in 1909 there was an increase to 123,751,000. Even in slack times certain purchases must be made to keep the roads in operation, so the figures of purchases of ties for new track have a direct bearing upon the general railroad situation. Of the total 1907 purchases, 23,557,000, or 15.3 per cent., were for new track. Next year only 7,431,000, or 6.6 per cent., were purchased for new track, but the number increased to 16,437,000, or 13.3 per cent., in 1909.

BALTIMORE.

The fourth annual message of Mayor J. Barry Mahool of Baltimore is a comprehensive survey, elaborated in detailed statements from the several departments of the city government, of municipal activities during the past four years, of the many great undertakings now under way and of evidences of marked improvement that has been made. The forty achievements in four years specially mentioned touch practically every point of healthy city life.

BIRMINGHAM.

In his annual report to the Chamber of Commerce of Birmingham, Secretary Jos. B. Babb shows that during 1910 all records were broken for expenditures and announcement of plans for industrial development in the district. Expenditures aggregated \$27,749,044, of which \$6,460,009 were expended by mining and furnace companies for improvements and the acquisition of new properties. The capital stock of new corporations aggregated \$12,614,980.

At the National Corn Show at Columbus, O., the Atlantic Coast Line Railroad Co., T. C. White, general passenger agent, distributed an attractively illustrated eight-page pamphlet showing what has been accomplished in corn-growing in the territory traversed by its lines.

LAKE MATTAMUSKEET DRAINAGE PROJECT.

By JOHN P. KERR of Middletown, N. C.

[Written for the Manufacturers Record.]

In January, 1909, Mr. J. O. Wright, then supervising drainage engineer in the United States Department of Agriculture, now chief engineer for the State of Florida in the drainage of the Everglades, in the preface to a report which he wrote for the Government upon the lands which have since been included in the Lake Mattamuskeet Drainage District under the laws of North Carolina, says:

"Hyde county, North Carolina, is located in the eastern part of the State adjacent to Pamlico Sound, and comprises an area of 596 square miles, practically all of which, in its present condition, is too wet for agriculture. (Perhaps three-fifths of the county is covered by the waters of Pamlico Sound and Lake Mattamuskeet.) The water from the northern part of the county is carried by the Alligator River and its tributaries into the Albemarle Sound. The fall is so slight, however, that a north or east wind drives the water up the river and overflows the adjacent land. The south and east portions of the county drain into Pamlico Sound, and the central portion into Lake Mattamuskeet, a shallow body of fresh water covering an area of nearly 80 square miles, which is situated a little south and east of the center of the county. A belt of country from one to three miles wide surrounding this lake has been settled for more than 100 years. The higher portions of this belt of land have been cultivated in wheat, corn, oats, cotton and vegetables, and when not drowned out by heavy rains yield good crops. At one time this section of the country was spoken of as the 'granary' of Eastern North Carolina. Even at the present day this land, after continuous cultivation for more than a century, yields abundant crops of corn and oats when the season is not too wet.

"The soil is a well-decomposed vegetable mold, containing a small per cent. of fine sand and silt, and at a depth varying from 3 to 10 feet is underlaid with a yellowish clay."

In 1908 the people of Hyde county appealed to the United States Government for aid in an attempt to better agricultural conditions by a general concerted system of drainage. As a result a corps of engineers was sent from the drainage investigations department at Washington in the fall of 1908, and a survey made of Mattamuskeet Lake and the adjacent land which drains into it, comprising in the aggregate from 100,000 to 120,000 acres. Upon the facts thus ascertained the United States Agricultural Department issued a report in which it was stated that the drainage of this district was practical and feasible by digging a system of canals which would carry the water of the district into a basin or reservoir, and the construction of a pumping plant of sufficient capacity to lift the water so collected over a wall into an outfall canal to discharge into Pamlico Sound. At the same time the Government had a soil survey of the district made, which showed that the land was such as to be highly productive if the water should be removed.

This report of the Government so encouraged the people of the county that in 1909 the organization of a drainage district, covering the bed of Lake Mattamuskeet and the lands naturally draining into it, was undertaken, the initiative being taken by the North Carolina State Board of Education, which owned the bed of the lake. The district thus organized under the laws of North Carolina was completed

in November, 1910, and the Board of Education, instead of contributing its part toward the expense of the work, sold its interests, amounting to 48,830 acres, covered by the waters of the lake, to the Southern Land Reclamation Co.

The estimated cost of the work necessary to drain this district was placed by the engineer in charge at approximately \$400,000. The total cubic yardage of ditching proposed is 3,427,202 yards.

It is proposed that the canals of the district shall be made to converge at a point on the southern shore of Lake Mattamuskeet, where a storage reservoir will be constructed and a pumping plant of sufficient capacity erected to lift 2000 cubic feet of water per second against a head of 10 feet and discharge it through an outfall canal into Pamlico Sound. This pumping plant is sufficient to take off a rainfall of between three-eighths and one-half inch in 24 hours. There are no springs in the lake, and no creeks or rivers empty into it, its waters being supplied altogether from rainfall and the water from such ditches as run into it from the adjacent lands. The estimated cost of the pumping plant is from \$150,000 to \$175,000, and of the canals \$200,000.

A board of drainage commissioners, composed of J. S. Mann, Middletown, N. C., chairman; T. H. B. Gibbs, Fairfield, N. C., vice-chairman, and John P. Kerr, Middletown, N. C., secretary, now has this work in charge, and is busy maturing plans for beginning operations. This drainage project will be watched with intense interest not only by the people of North Carolina, where there is so much coastal plain in need of drainage, but by the whole country, more especially the South Atlantic States. The drainage commissioners expect to be ready to ask for bids of this work within the next 60 days, and within the same period will probably offer for sale a \$400,000 6 per cent. bond issue to raise money for financing the enterprise.

[In our issue of January 19 we published a reference to this project by our Raleigh correspondent as "the greatest drainage district in the South." We were mistaken in permitting the use of the superlative without clear qualifications, as it tends to create an erroneous impression upon readers, who might confuse the word "district," meaning the local territory upon which local drainage projects in a number of Southern States are based, with the word "area" or with some notable feature of the plan. In some cases a drainage project may reclaim a larger area than that within the drainage district proper; in others, a number of drainage districts may be combined in one drainage project affecting a much larger area than the late Mattamuskeet district; in others, as in the case of the Florida Everglades, looking to the reclamation of 5,000,000 acres of land, the project may be a State undertaking distinctly rather than upon a local basis, and others may have unique features like those of the Lake Mattamuskeet project.—MANUFACTURERS RECORD.]

The splendid exhibit of the mineral and timber resources of Virginia made at the Jamestown Exposition has been formally and permanently established at Richmond through the co-operation of the Exposition Commission, the railways and the mining and timber interests of the State as a means of advertising the opportunities for investment and enterprise.

BRICKMAKERS FOR PUBLICITY.**Keynote of the Annual Convention of Manufacturers at Louisville.**

At the annual convention last week at Louisville of the National Brick Manufacturers' Association, with its constituent bodies, the National Paving Brick Manufacturers' Association, the National Building Brick Association and the National Clay Machinery Association, the keynote was "publicity." Mayor W. O. Head in welcoming the 500 delegates alluded to Louisville as a brick city. He said:

"When it comes to common brick and front brick, ornamental brick and vitrified paving brick, enameled brick, fire partition brick and the more ornamental terracotta, why we want to tell you that we are proud of our brick town. Louisville is well to the front in clay products. Here we manufacture soft mud, stiff mud, dry press and hand-made brick, fire-brick, vitrified, salt-glazed sewer pipe, terra-cotta in a limited way, wall copings, chimney tops, drain tile, hollow building blocks, fireproofing materials, locomotive tiles, fire-clay specialties, pottery and paving brick.

"I notice your slogan for 1911 is, 'Advertise Brick!' Fine! Now you are winding the alarm clock to arouse the business world. Advertising promotes business growth. It makes the universe hum. When growth stops decay follows. Most people in all lines of business are alert and appreciative, but it takes a genius to sell anything. Edison says genius is one-tenth inspiration and nine-tenths perspiration. To sell goods requires an honest product, enthusiasm and perspiration. Publicity is the mightiest force in the realm of humanity. It serves as an adviser, it warns, it pleads, it urges, it defends and it enlightens."

That city exhibit is a species of publicity, and that subject was the burden of an address by John Andres of Evansville, Ind. He said:

"The time has arrived in the history of the manufacturers of brick when they must break away from their overconfidence in relying upon brick to sell itself upon its merits alone; when they must meet the situation as it is, learn the secrets of those who are forging to the front in other lines, employ their methods and go into the battle for supremacy with the very best weapons known to commerce. Our members were not slow to avail themselves of the help of the electric motor, the gas producer, the natural gas, the oil fire and waste, and yet it is remarkable that they are the last people on earth to realize the value of hot air in selling the product. The man who has an article for sale must tell the public in an intimate way what it is good for, how it is better than similar articles, what is gained by using it and what is lost by not using it. And this must be told a thousand times, according to the president of one of the leading industries which does a world of newspaper advertising.

"It seems strange that many cities have to go through the experience of a great conflagration before their eyes are opened to the necessity of using only fire-resisting materials in crowded centers. It is only by the free use of the columns of the press in calling attention to fires that we can hasten the day when our material will receive the recognition to which it is justly entitled."

Mr. R. E. Sunderland of Omaha, Neb., in discussing the "missing link between success and failure," said:

"We have simply been asleep. We have not advertised. Our competitors have advertised, and as a result they are getting the business. When you buy soap or flour or any other commodity, whose brand do

you buy? The brand you always see advertised, of course. It is the same way with the home-maker. When he proposes to build a home he simply goes by advertisements, and he never sees a brick advertisement. The only advertisements he sees are of cement and stucco and wood-work. Consequently, we lose his trade. He almost forgets there is such a thing as brick. It is now up to the brick manufacturers to advertise if they want to keep in the market."

Mr. R. L. Queisser of Cleveland, urging publicity, said:

"It requires the expenditure of time, energy and money. The result will be more than commensurate with the outlay. It is not enough that some of you are working capacity; there should be such a demand that all yards should be working to the same end, and when that time comes—and come it will, speedily if you get together—the question will not be, as unfortunately it is today, at what minimum figure can you move your bricks, but instead you can demand and secure a fair compensation for your time, your machinery and your quickly-vanishing clay fields. What you want is the development of a greater market that will consume your manufactured product. Increase the demand; the supply will take care of itself."

The National Brick Manufacturers' Association elected Charles M. Crook of Youngstown, O., president; C. A. Bloomfield of Metuchen, N. J., first vice-president; W. H. H. Rogers, second vice-president; Eben Rogers of Alton, Ill., third vice-president; Theodore A. Randall of Indianapolis, secretary, and John W. Sibley of Birmingham, treasurer.

The National Paving Brick Manufacturers' Association elected C. J. Deckman of Cleveland, president; J. W. Robb of Clinton, Ind., vice-president; C. C. Barr of Streator, Ill., treasurer; Will P. Blair of Indianapolis, secretary.

The National Building Brick Association elected R. L. Queisser of Cleveland, president; Ralph Simpkins of St. Louis, vice-president, and J. Parker B. Fiske of New York, secretary and treasurer.

The National Clay Machinery Association elected L. W. Penfield of Willoughby, O., president; H. J. Flood of Chicago, vice-president; J. H. Chambers of Philadelphia, treasurer; W. N. Durbin of Anderson, Ind., secretary; members of the executive committee, H. H. Fate of Plymouth, O.; F. W. Bennett of Wellington, O., and B. E. Place of Galion, O.

ARANSAS PASS HARBOR.**Government Improvements and a Development in the City.**

[Special Cor. Manufacturers Record.]

San Antonio, Tex., January 26.

The United States Board of Engineers having made a definite selection of a Government harbor site at Aransas Pass, the Aransas Pass Channel & Dock Co. is taking steps to put in wharves and slips without delay. A contract has been let to J. P. Nelson, San Antonio, with bond for completion of work by May 21, 1911. The first wharf will be of piling, 88x500 feet, with a railroad track on each side, and there will be a warehouse 50x100 feet in size. Both of these improvements will be of a temporary nature, the intentions being to hurry up the work so as to get business started. The cost of the improvements in contemplation will be about \$75,000.

Later there will be other slips of 1000 feet in length, of more substantial construction, and other improvements are in contemplation that will represent a total cost of about \$1,000,000. Work on these improvements will not be commenced before fall. It is the intention to build three

additional slips in all. One will be equipped for ores northbound from Mexico and for coal southbound from Eastern points. Another will be for cotton, and a third for merchandise. It is the expectation that a considerable business will be built up, extending over a large portion of Southwest Texas.

The site selected by the Government engineers as the harbor extends along the front of Harbor Island, immediately opposite Aransas Pass, for a distance of 8000 feet from the channel dug by the Aransas Pass Channel & Dock Co. from the Pass to the city of Aransas Pass, the channel being six miles in length and having a present depth of from 10 to 15 feet.

The dirt from this channel, dumped on one side, has made a roadway, which can be utilized for a railroad, and it is planned to connect the harbor with the mainland along this road, or to extend the Aransas Pass & Terminal Railroad, which has already been built a distance of three miles from the shore. This railroad is owned by Alexander Brown and the Maryland Trust Co. of Baltimore. Should the plan of extending this road materialize, it will be necessary to put in a drawbridge across the channel with a 50-foot opening.

The location of the harbor obligates the Government to keep the channel clear for navigation to within 75 feet of the docks.

Four locations were given consideration and were urged by the various interests of the places. One was at Rockport, 14 miles to the north; another Corpus Christi, 22 miles to the south, the third being the city of Aransas Pass, and the fourth the Harbor Island frontage.

In the work of creating deep water at Aransas Pass the Government has spent more than \$1,500,000. The appropriation asked of the present Congress by the engineers for completing and making effective the work already done is \$375,000.

The Government improvements at Aransas Pass were commenced in 1891, but the work was not undertaken in earnest until 1902. When the Government commenced work there was nine feet of water in the Pass. Now there is 24 feet over most of it. There is a depth of 24 feet over approximately 1000 feet, when it deepens again to 40 feet. The Government channel is between Mustang and St. Joseph islands. The jetties are 7000 feet long, 1200 feet apart, and extend to the 25-foot contour line.

The \$375,000 appropriation asked for will complete the dredging of the anchorage and build a breakwater along the center of St. Joseph's Island to protect the harbor from the waters of storms.

With the improvement of Aransas Pass by the Government there has been considerable development in the town of Aransas Pass. There are about 2000 people living there now, whereas there were only about 100 a little over a year ago. A \$50,000 ice plant has been built, a bank established, a lumber yard and machine shop put in and a number of stores built.

In addition to the development of the town, there has been considerable development in truck raising. Aransas Pass has been quite a heavy truck-shipping point for early vegetables, particularly tomatoes and cucumbers. The section is also well adapted to figs and grapes, and almost every kind of vegetable, and rapid development is being made in all these lines.

Settlers on the lands of this section come from various parts of the country, even from Iowa and other Northern States.

In the course of time it is expected that there will be a city of some magnitude built up here, and that it will be surrounded by a thickly-settled agricultural community.

ALBERT PHENIX.

Irrigating Texas Rice Lands.

Referring to plans for irrigating Texas rice lands, a dispatch from Austin says:

"Many billion gallons of water will be conserved to irrigate probably over 1,000,000 acres of fertile land in the rice belt of Texas in the event the plan projected by County Judge W. S. Holman and his associates from Matagorda county is carried out. Judge Holman, county judge of Matagorda county; Col. John N. Simpson of Dallas, who is interested in the irrigation of the rice lands of South Texas, and Col. J. F. Barstow of Barstow are here to prepare a bill which will be introduced in the Legislature for the conservation of the water supply in storage reservoirs to be used for irrigation and water purposes.

"Judge Holman said they represented the rice interests of South Texas, and that land owners, rice growers and the canal men are all united on this proposition. He explained that last season the Colorado River in Matagorda county went dry during the season that water was most needed, and if these gigantic storage tanks or reservoirs had been constructed there would have been conserved a sufficient quantity of water to irrigate over 1,000,000 acres of rice land. In Matagorda county alone, Judge Holman said, there were upward of 100,000 acres of land susceptible to irrigation. The proposed bill will provide for the creation of a State waterway commission to take charge of the distribution of the water, fix the rates to be charged the growers, provide for the incorporation of companies to build and operate the reservoirs, etc."

Interstate Builders.

At the annual convention last week at Norfolk the Interstate Builders and Traders' Association selected as its board of governors:

Washington—John R. Galloway, president; S. J. Prescott, W. D. Nolan, E. C. Graham and B. T. Pillow.

Baltimore—L. H. Scates, secretary; John Trainor, T. S. Chavannes and W. H. Morrow.

Norfolk—Perry W. Ruth, first vice-president; A. Christie, M. A. Williams and J. M. Bunting.

Richmond—W. A. Chesterman and W. Douglas Gordon.

Another Portland Cement Plant.

The Choctaw Portland Cement Co. of Hartshorne, Okla., has been chartered with a capital stock of \$1,200,000, and the officers are as follows: President, C. B. Blake of Hartshorne; vice-president, B. E. Allison of Kansas City, Mo.; treasurer, E. H. Jayne of Oklahoma City. This company will build a plant costing \$700,000, erect a stone crusher and construct a branch railway to the plant site, which is three miles from Hartshorne. General offices in the Insurance Building, Oklahoma City.

To Reclaim 1900 Acres.

The Arcadian Land Co. of Waverly, N. Y., has purchased 1900 acres of land in the Barataria district near New Orleans, and will reclaim the property at a cost of about \$50,000. This land was purchased from the Louisiana Meadows Co. of New Orleans, of which Edward Wisner is president, and with this company the purchasing company will have its offices at New Orleans. E. W. Lyford, vice-president and general manager of the Arcadian Land Co., is also president of the First National Bank of Waverly.

The "Back Home" convention at Chattanooga, Tenn., has been postponed from February 15 until March 15.

Expanding Uses of Cement in the South.

By WILLIAM H. STONE.

[Written for the Manufacturers Record.]

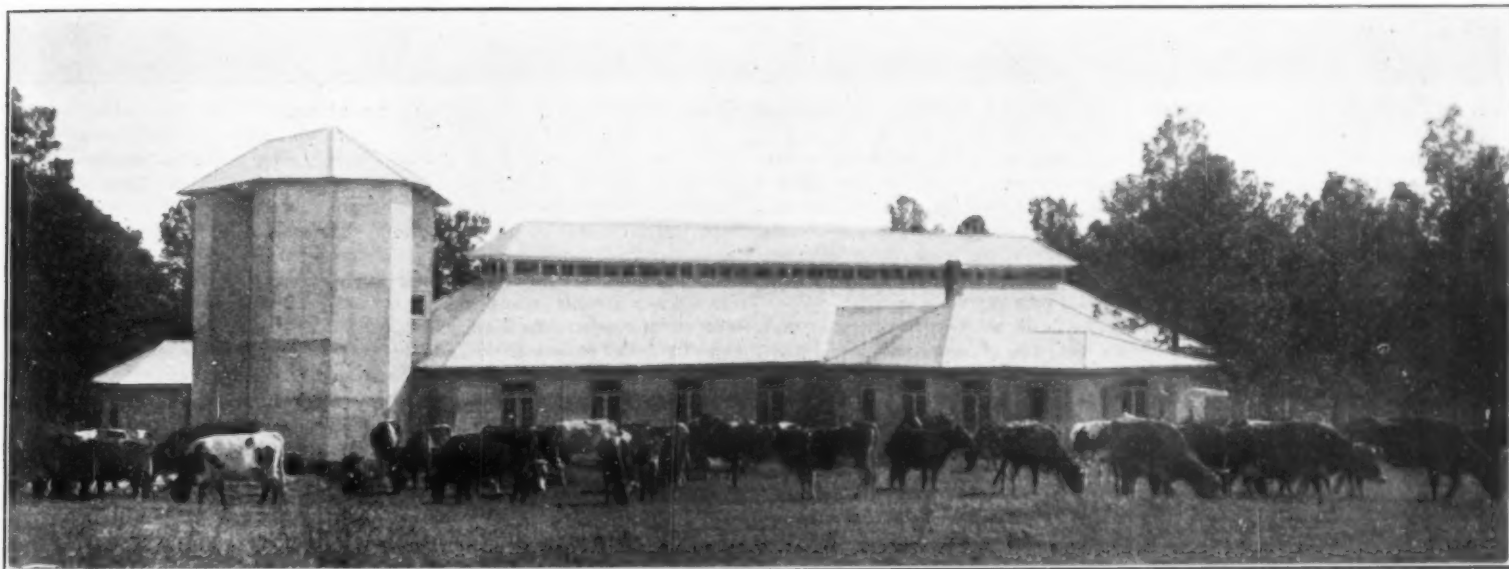
The annual cement shows held in Chicago under the auspices of the Cement Products Exhibition Co. center the interest of all of those having to do with construction work of all kinds in Portland cement. These shows have had a potent influence in educating the layman, technical man and practical man up to the varied possibilities of cement. They have also learned to look forward to these shows to ascertain the progress made from year to year in new uses and improved equipment and tools for doing the work. As a

has been offered for sale. They wisely realized that their publicity work must in every sense be of an educative nature, and pursued this policy in their advertising copy run in the leading industrial, technical and other papers, while a great many of the larger companies issue booklets that are replete with valuable information regarding the best methods to pursue to achieve the best results in the use of cement, and also profusely illustrated with photographs of buildings and other engineering undertakings built of this material.

The cement manufacturers also have an organization known as the Association of American Portland Cement Manufacturers, with offices in Philadelphia. From this headquarters a very intelligent campaign and one of wide scope has been carried on in studying new uses of cement, improving upon old ones and in every way placing the industry upon a firm and sure foundation.

The Cement Products Exhibition Co. recently held a cement show in New York city, and the attendance far exceeded their

expectations, thus evidencing the desire of the public generally to know more about cement. This is going to be an annual affair similar to the Chicago show. The Cement Products Exhibition Co. does not hold these for a matter of profit, but merely as part of the general publicity campaign for cement. In view of the widespread interest the Chicago show, which holds forth in the big Coliseum from February 16 to 23, inclusive, will attract to cement, the MANUFACTURERS RECORD has gathered together a few photographs of recent ce-

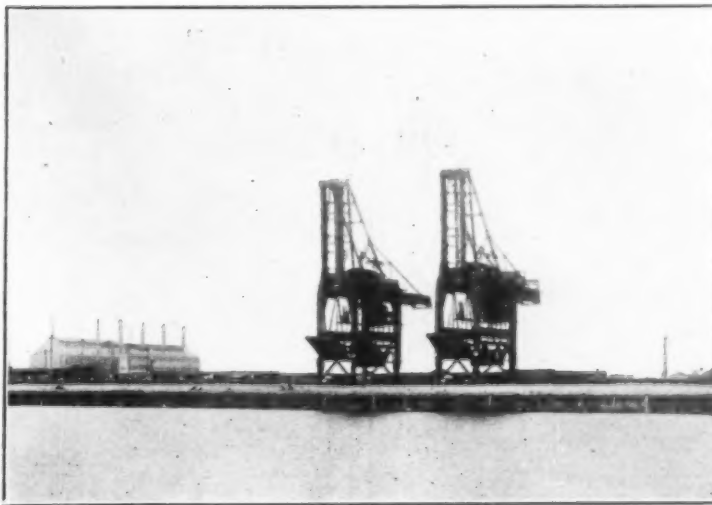


CONCRETE FARM BUILDINGS AT FAIRWOLD FARM, NEAR COLUMBIA, S. C.

result it is now recognized by those interested in construction work in any way that it is almost necessary for them to attend these shows in order to keep pace with the rapid advances being made in the development of this material.

Never before in the history of constructive materials has any of them come to the front as rapidly and as substantially as Portland cement, and it is no exaggeration to say that this, indeed, is the "Cement Age." It has been but a few years since a reinforced concrete structure was a rarity, while today there is no large city and hardly a town that has not some work constructed of this material.

Perhaps the greatest influence on the rapid growth and appreciation of cement has been due to the cement manufacturers themselves. The publicity work which they have carried on in connection with the marketing of the product has been one of the broadest, most comprehensive that has ever been planned for anything that



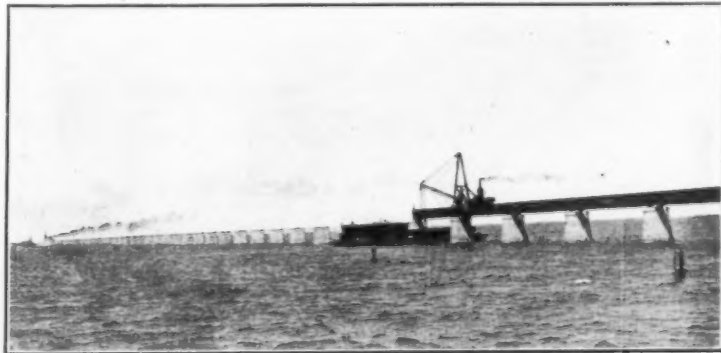
REINFORCED CONCRETE ORE DOCK, MARYLAND STEEL CO., SPARROWS POINT, MD.

ment and concrete work constructed in the South, in order to indicate its extent in that section.

Few people, perhaps, realize how broadly Portland cement is being used in every phase of Southern construction work. In the construction of railroads, for industrial and business buildings of all kinds, for municipal work, for piers and docks, street and highway construction, on the farm and in most every undertaking incident to the South's development, Portland cement is being used in some way or another.

It would be hard to estimate the total consumption in barrels in the South and Southwest, but it is a known fact that this has been increasing more and more every year, and although new Portland cement plants are being built from time to time in various of the Southern States, it is continuing to consume an increasing amount of cement produced in other sections of the country.

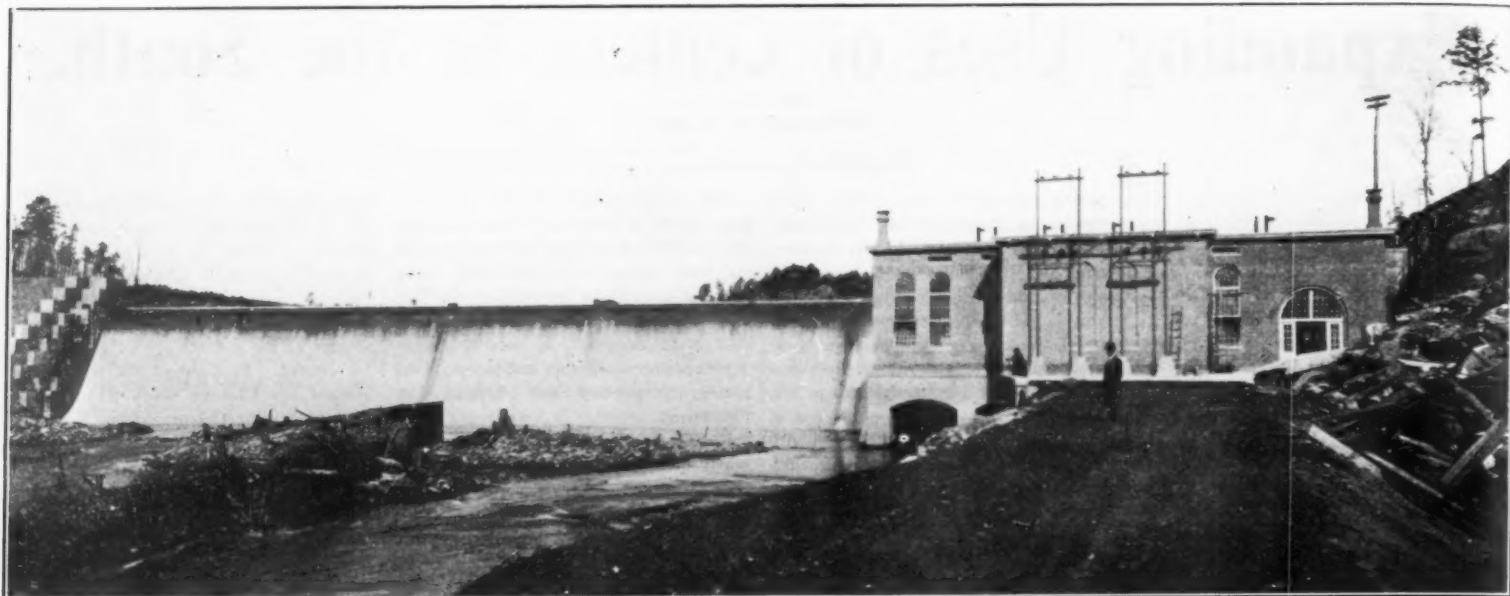
Architects and engineers planning new



KNIGHTS KEY.—CONCRETE AND STEEL VIADUCT, FLORIDA EAST COAST RAILWAY.



LONG KEY VIADUCT, TWO MILES LONG, FLORIDA EAST COAST RAILWAY.



GREENVILLE-CAROLINA POWER CO.'S HYDRO-ELECTRIC DEVELOPMENT ON THE SALUDA RIVER.

work in the South have been quick to realize the wonderful diversified possibilities of cement and how it lends itself alike to providing the strongest possible foundations for the heaviest structures, and at the same time can be used for producing most pleasing ornamental effects. In fact, in recent years wonderful progress has been made in the use of cement for decorative purposes and for the more ornate class of structure. But once these possibilities were demonstrated, it has spread with great rapidity, and today some of the finest examples of architecture are those constructed of Portland cement. It seems to make no difference what the

undertaking may be or under what conditions the work is to be constructed, architects and engineers have found that cement readily adapts itself to these conditions and enables results to be achieved that in some cases would never have been possible with any other material.

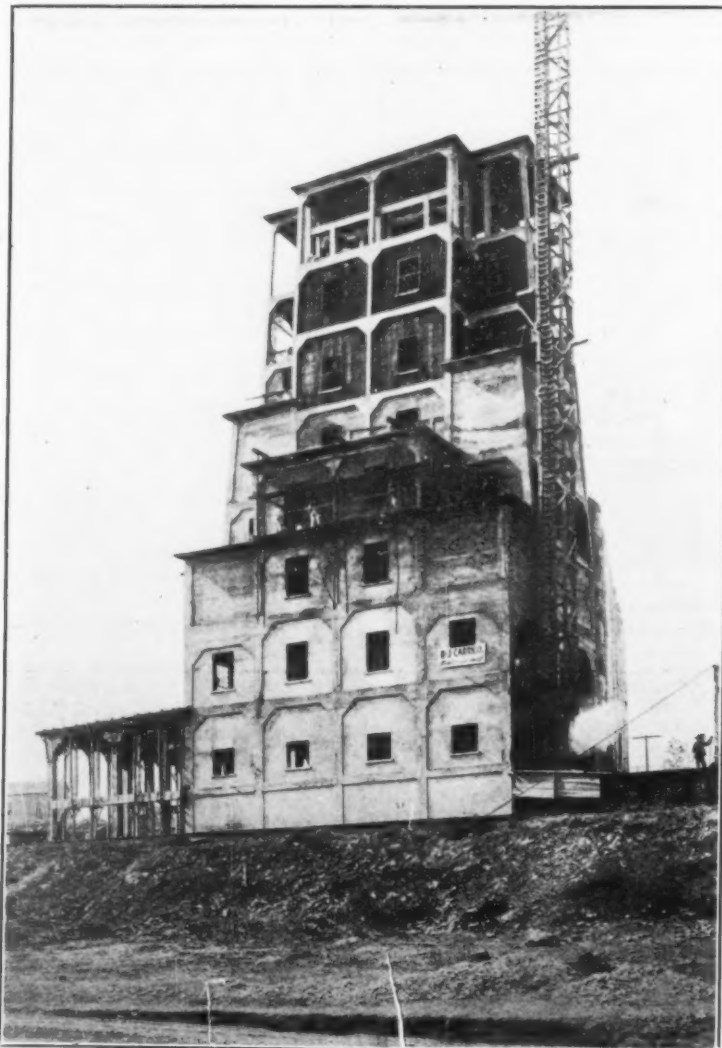
The South has been fortunate, in that the many uses of cement have been demonstrated at the very time it has been actively engaged in laying the foundations for its future greatness, so that the structures it is now erecting are being placed on foundations as strong and lasting as that upon which the South's development and future rests. In many ways the development of the Portland cement indus-

try has been coincident with the development of the South. Both of them have achieved wonderful results in the past 30 years, and in neither of them has there been a retrograde movement in advancing at an increasing rate year by year. Every year marks a steadily-expanding increase in the use of cement in the South, and this demand is bound to be a growing one, because the South is developing and prospering in such a wonderful manner that it is always calling upon the manufacturers of the country for an increasing quantity of supplies and equipment of all kinds.

When it is considered, too, that new uses for cement are continually coming up, especially its adaptability for farm work,

there is every reason to look for a yearly growing demand in the South for many years to come.

The railroads of the South early realized the advantages which cement offered that in many cases were not possessed by other materials, while in a good many others it provided foundations for steel work that were superior, more plastic and more economical than the materials heretofore used. Today on the Southern railroads we find concrete used for lining tunnels, building bridges, culverts, viaducts, water tanks, coaling stations, retaining walls, foundations, shop buildings and other general construction work. As one rides along the lines of the Southern railroads



SMITH BROS.' REINFORCED CONCRETE GRAIN ELEVATOR, FORT WORTH, TEX.



CARTER OFFICE BUILDING, HOUSTON, TEX.

today evidences of the extended use of cement are available on every hand. Both the Virginian Railway and the Carolina, Clinchfield & Ohio Railway, the most recent examples of high-grade railroad construction in the South, are striking examples of the adaptability of concrete for railroad construction work. These roads pass through very difficult mountain sections, and it is interesting indeed to note the substantial character of construction.

In a number of cases streams had to be crossed that in flood times would wash away ordinary structures. Here you find massive concrete abutments and piers capable of withstanding the rush of the waters during the overflow periods. On the Clinchfield there are a great many tunnels, and these are lined with concrete and present a very striking and substantial appearance. The approaches to the tunnels also have concrete portals, giving them a very attractive appearance. When one considers that if other materials had been used it would have been necessary to have hauled them long distances and overcome many difficulties in putting them in place, all of which would have added considerable to the cost of the work, the advantage of using concrete can be readily seen. With the use of Portland cement, however, it was only necessary to ship this to the point where it was to be used, and in most cases the necessary sand and broken stone was available on the job, and not only was the work done more quickly and more cheaply, but also in a more substantial manner.

Railroads having water terminals have also found Portland cement well adapted for construction of piers and docks and the building of grain elevators, storage bins, warehouses and other terminal facilities. Striking examples of these are found in the work being done by the Pennsylvania and Western Maryland railroads in Baltimore, the Texas City Transportation Co.'s terminals at Texas City, Tex., and by other roads in various of the other seaport towns along the Atlantic and Gulf coasts.

In the construction of their shops railroads have also found cement a splendid material, and today we find concrete round-houses, storage-houses, shops for various purposes, etc. In a number of cases, too, in the South this material has been adopted for the construction of stations.

When one considers the decided impetus given the harnessing of the rivers of the

South for power-producing purposes and the important part which Portland cement is playing in the construction of such work, he can readily appreciate the influence which this material has had upon such undertakings. Heretofore the dams in the rivers had to be constructed of heavy masonry, which, if the material did not exist in the immediate vicinity, had to be hauled so far and at such great cost that the project could not be constructed to pro-

duce revenue. But with the advent of cement conditions were changed, and now the rivers of the South are being harnessed and power placed at the disposal of industries at comparatively low cost, thus bringing into play a most potential factor in its future development.

There are some very striking examples of water-power development recently completed or in course of construction in the South at this time, among them being the

half-mile-wide dam of the Pennsylvania Water & Power Co. on the Susquehanna River near Baltimore; Southern Power Co.'s new plants at Rocky Creek and Ninety-nine Islands, N. C.; Central of Georgia Power Co.'s high dam between Macon and Atlanta; Chattanooga-Tennessee River Power Co.'s large undertaking below Chattanooga, on the Tennessee River, and others of varied size and importance. A vast quantity of cement has been used in this work, and when the opportunities still available for power development are considered there is bound to be a steady increase in demand for Portland cement for this work in the future.

Portland cement has been found adaptable for practically every class of building construction, whether it be a public building, private residence, a factory, an office building or those special purposes. The South has been using this material to a large extent in the construction of its buildings. While at first they were confined mainly to the construction of the framework and other parts of the building that were not exposed, it is more and more being used for exterior and decorative purposes. Various cement manufacturers and those who make a specialty of building cement structures have demonstrated to the satisfaction of the leading architects of the country the wonderfully varied artistic possibilities of Portland cement, and as a result it is being specified by them for such work more and more every year.

Southern architects and engineers are using cement to a great extent for building construction, and during the past year some very striking and imposing buildings have been constructed of this material in the South and Southwest, these including commercial, manufacturing, municipal, office, hotel and other varied structures. The very fact that such buildings are being built of cement to an increasing extent testify to the more substantial character of structure being erected in that section and the desire to obtain buildings that are modern and fireproof in every particular.

Cement is also being recognized in the South as an ideal material for workmen's dwelling-houses, and in a number of cases large industrial companies are erecting such homes because not only are they rat, vermin and fireproof, but induce cleaner living on the part of the employees, and when vacated can be more easily cleansed and renovated.

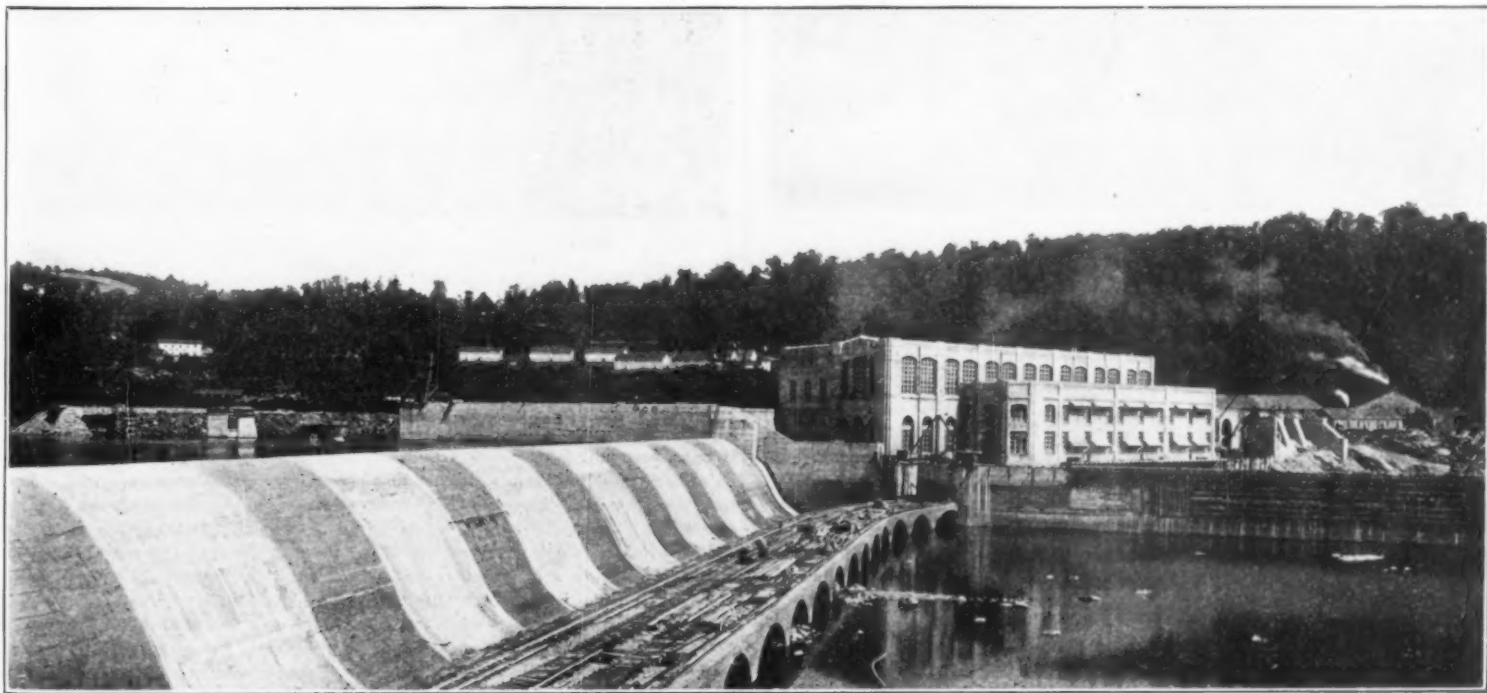
A striking example of the South's pro-



SOUTHERN POWER CO.'S ROCKY CREEK DAM.



SOUTHERN POWER CO.'S NINETY-NINE ISLAND DAM.



DAM AND POWER-HOUSE OF THE PENNSYLVANIA WATER & POWER CO., SUSQUEHANNA RIVER, NEAR BALTIMORE.

gressiveness in the use of concrete is the Anson Mills office building, recently completed at El Paso, Tex. This structure, which is 12 stories high, is built in its entirety of that material, including even the ornamental work on the exterior. This structure, moreover, is said to be the largest of its kind ever completed in this country.

Another striking example of reinforced construction work is that of Simpson & Doeller, Baltimore, this building being 218x240 feet and costing about \$100,000. Other interesting examples include in Houston, Tex., the Southern Pacific office building, Southern Pacific Hospital, City Auditorium and Carter office building; in Louisville, B. F. Avery & Sons' large plow

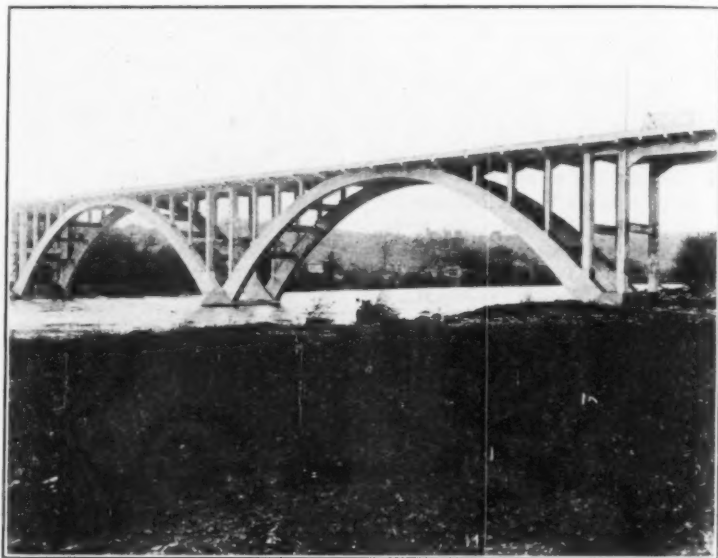
Elks' Club, costing \$75,000; six-story Nakidiman building, costing \$100,000; in Dallas, Tex., eight-story massive mercantile building, 165x317 feet, for Butler Bros., costing \$600,000; in Jacksonville, Fla., three-story Florida *Times-Union* building, 90x100 feet, costing \$50,000; in Huntington, W. Va., 10-story Robeson & Prichard building of reinforced concrete, costing \$300,000; in Norfolk, Va., two-story 100x200 feet reinforced concrete warehouse for Jones & Co., Inc., costing \$50,000; in Atlanta, large addition to the Piedmont Hotel, publishing plant of the *Atlanta Journal*, large Coca-Cola Company's new building. While reference is made to only a few of the buildings in the South which have used concrete or rein-

rial only adaptable for that purpose, many thousands of dollars can be saved, because when properly built of cement it would be impossible for rats to gain an entrance to such a corn crib. Then for fenceposts the farmer is finding concrete ones, once put in place, are there for all time, and they are so firmly planted in the ground that they resist the attempt of cattle and horses to knock them over. The adoption of concrete for this purpose is relieving the farmer of a great deal of worry and trouble. Cement has also been found ideal to silo construction, and today there is found in the South quite a number of these being used. One of the accompanying illustrations gives a striking evidence of cement's adaptability to farm work.

What is conceded to be the most modern undertaking of its kind in the world is the complete sanitary sewerage system now being built in Baltimore, and cement has been an important factor in every phase of its construction. The main outfall sewer, leading from the main sewer to the disposal works, is over five miles long, and has an inside diameter of 11x13 feet, and is 15 inches thick. This outfall sewer is constructed entirely of concrete. The sewage-disposal works form one of the most interesting pieces of concrete work in the country. This covers acres of ground, and as one looks over it he cannot help but reflect upon the wonderful possibilities of cement. Louisville, Ky., New Orleans, La., and other Southern cities



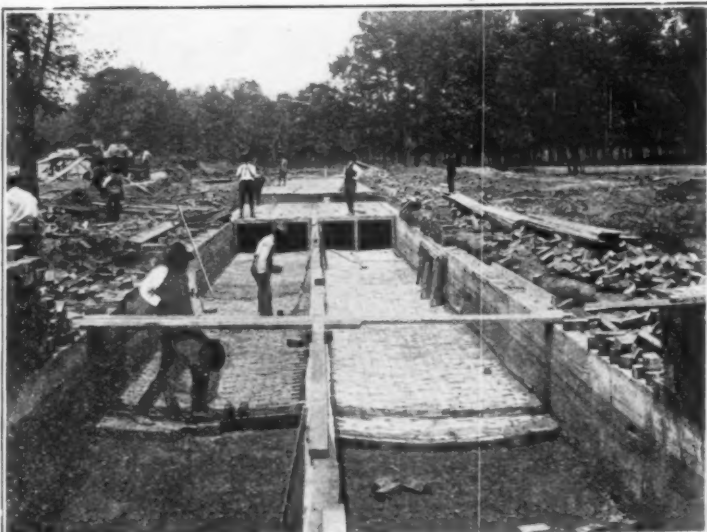
SOUTHERN RAILWAY'S REINFORCED CONCRETE VIADUCT, ASHEVILLE, N. C.



REINFORCED CONCRETE BRIDGE, ASHEVILLE, N. C.



STRINGER'S RIDGE TUNNEL, HAMILTON COUNTY, TENNESSEE.



CONCRETE SEWERS, COREY, ALA.

manufacturing plant, the Sneed beehive manufacturing building, this being eight stories, 90x190 feet and of reinforced concrete construction throughout; Tyler Hotel, eight stories high, of reinforced concrete and costing \$225,000; the Business Women's Club, of reinforced concrete construction, costing \$100,000; in Birmingham, seven-story Chamber of Commerce of reinforced concrete, costing \$300,000; in Tulsa, Okla., five-story Reeder building, five-story Central National Bank building, five-story Drew building and two-story Ratcliff-Sanders warehouse; in Fort Smith, Ark., eight-story First National Bank building of reinforced concrete construction, costing \$225,000; six-story Hotel Goldman, costing \$350,000; four-story

forced concrete in some form, they are sufficient to give an idea of the broad and varied utilization of that material in the South, and are conclusive evidences of the knowledge which Southern architects and engineers have of Portland cement's adaptability for work of every character.

Perhaps one of the most useful and what promises to be one of the most extensive uses to which cement has been found adaptable is that of farm work. In many ways this material has proven a blessing to the farmer, and progressive ones of the South are rapidly realizing that with the use of cement they can overcome many heretofore practically insurmountable difficulties and drawbacks. In the construction of corn cribs alone, were this mate-

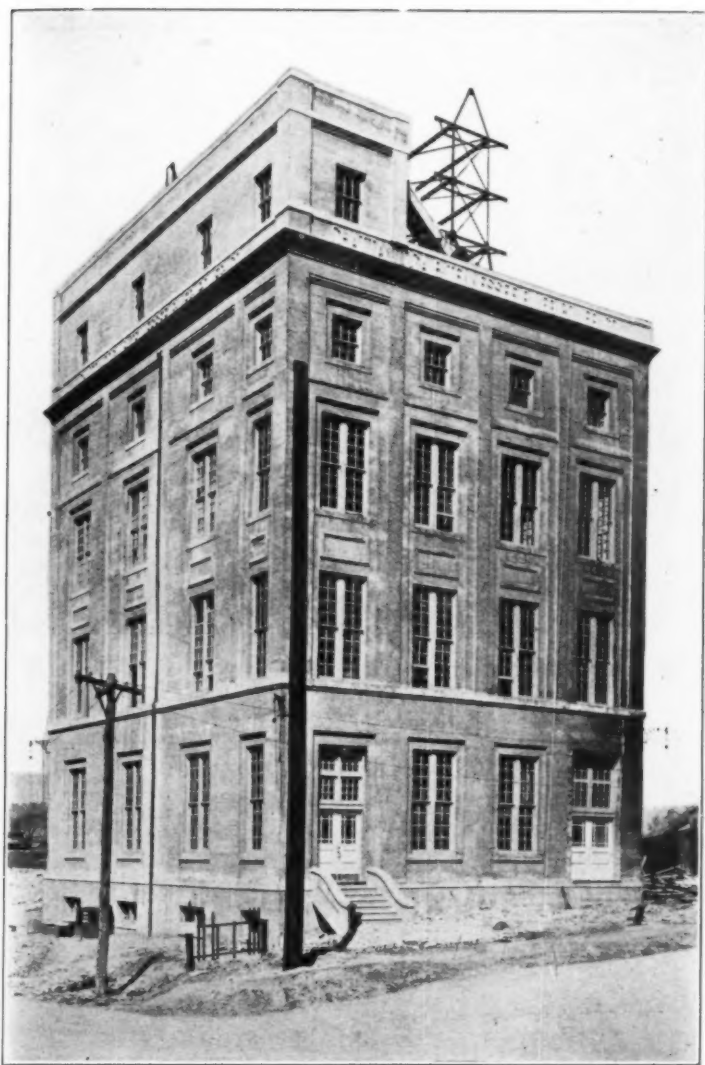
This illustration shows a silo and cow stable erected at Fairwold farm, near Columbia, S. C. In the cow stable a special concrete floor arrangement was built, providing for every facility needed. Southern farmers are also using concrete for troughs, barnyard floors, walks, icehouses, dairy houses, and are learning all the time new uses to which this material is well adapted.

For municipal and county work the South is using cement for many varied purposes. In the cities and towns for the construction of sewers, sewage-disposal plants, water-works, reservoirs, etc., this material is now used in increasing volume, while in county work they are using it for highway bridges, culverts, sidewalks, etc.

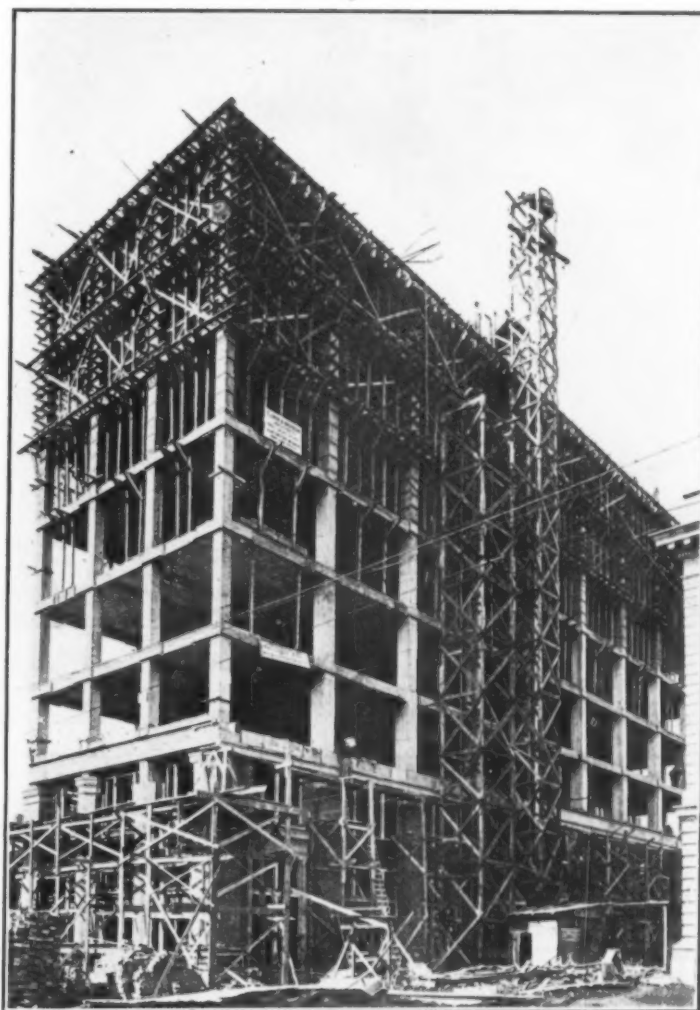
also are installing very modern sewerage systems, and cement is largely being used for the work, while Richmond, Va., has recently completed a very interesting water supply and filtering system.

To mention all the work that is being done in the South, and in which cement is being largely used, would require too much space, but those who follow the construction columns of the *MANUFACTURERS RECORD* know that this material has become an important factor in every character of construction work in that section, and the various accompanying illustrations are sufficient to evidence the knowledge and appreciation which the South has of the varied uses and possibilities of Portland cement.

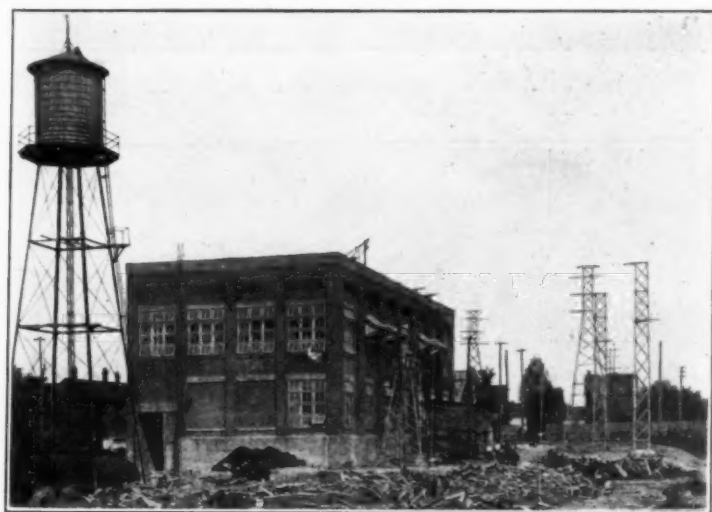
ILLUSTRATIONS OF TYPICAL USES OF CEMENT IN THE SOUTH.



TRANSFORMER STATION, CHATTANOOGA-TENNESSEE RIVER POWER CO.



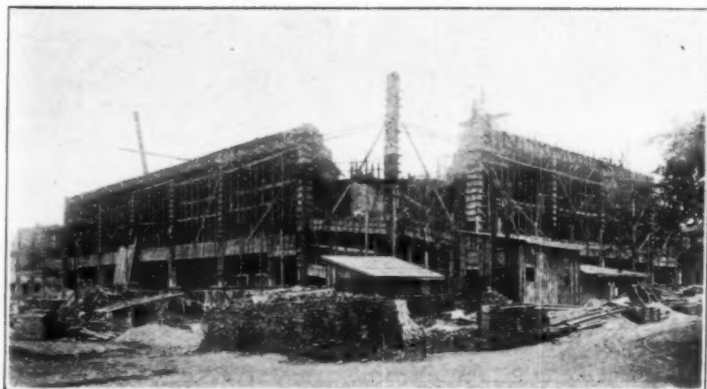
ROBESON-PRICHARD BUILDING, HUNTINGTON, W. VA.



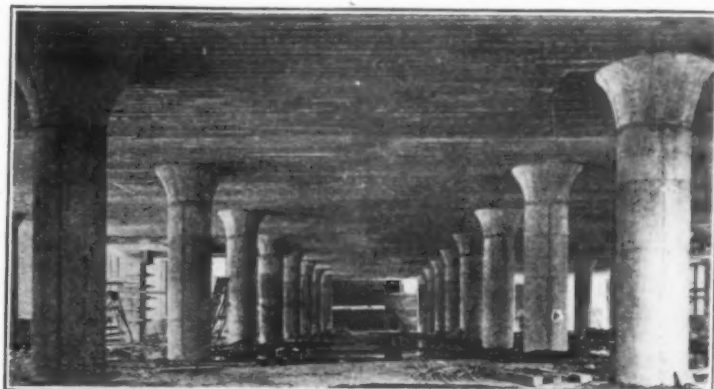
TRANSFORMER STATION, PENNSYLVANIA WATER & POWER CO., BALTIMORE, MD.



SNEAD MANUFACTURING BUILDING, LOUISVILLE, KY.



CITY AUDITORIUM, HOUSTON, TEX.



INTERIOR SNEAD MANUFACTURING BUILDING, LOUISVILLE, KY.

ILLUSTRATIONS OF TYPICAL USES OF CEMENT IN THE SOUTH.



A MODERN REINFORCED CONCRETE PRINTING PLANT, BALTIMORE, MD.



BUSINESS WOMEN'S CLUB, LOUISVILLE, KY.



CONCRETE OIL CATCH-BASIN, BATON ROUGE, LA.



AMERICAN BAG CO., MEMPHIS, TENN.

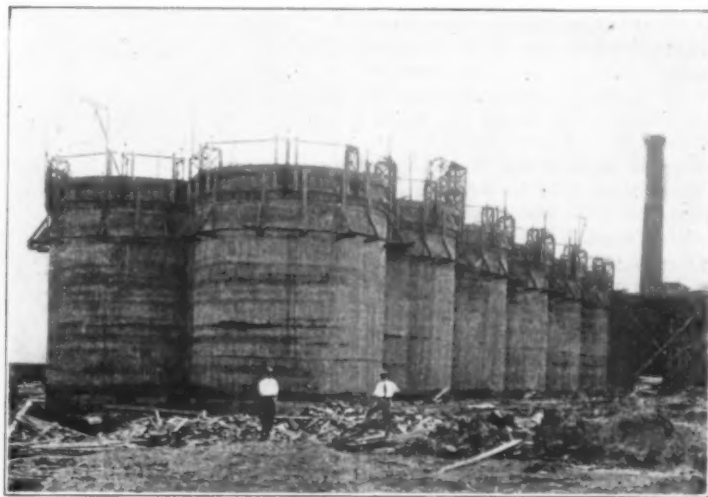


GALVESTON, TEX.—REINFORCED CONCRETE CAUSEWAY: LENGTH 10,675 FEET; 23 CONCRETE-STEEL ARCHES.

ILLUSTRATIONS OF TYPICAL USES OF CEMENT IN THE SOUTH.



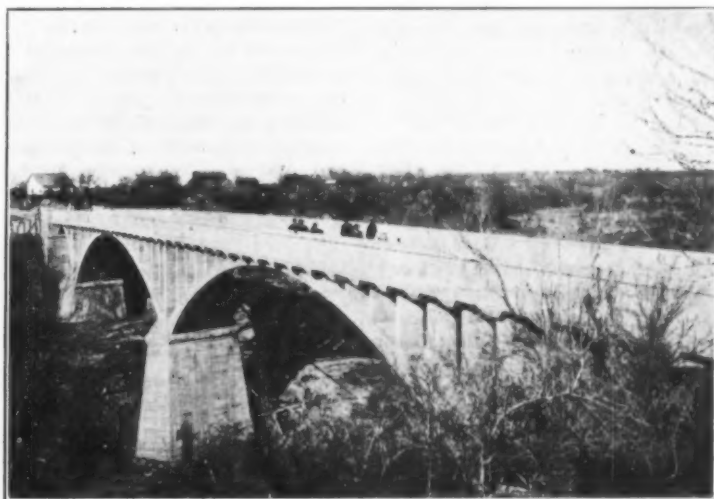
TEXAS CITY, TEX.—TERMINAL CONSTRUCTION.



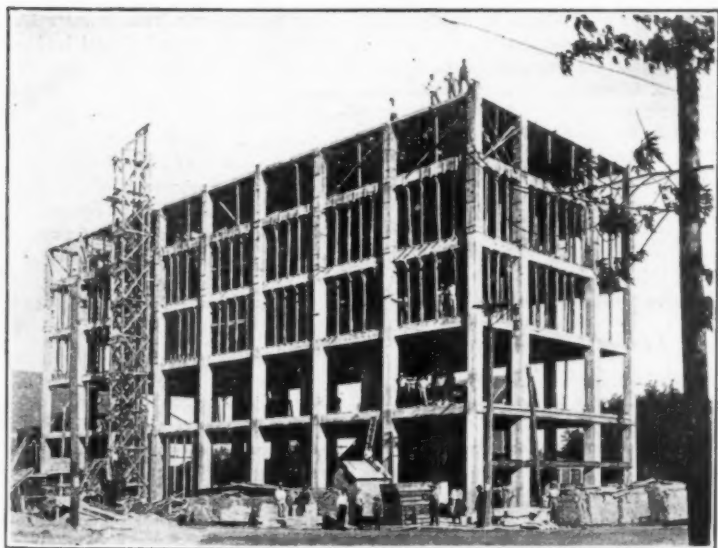
REINFORCED CONCRETE GRAIN BINS, TEXAS CITY, TEX.



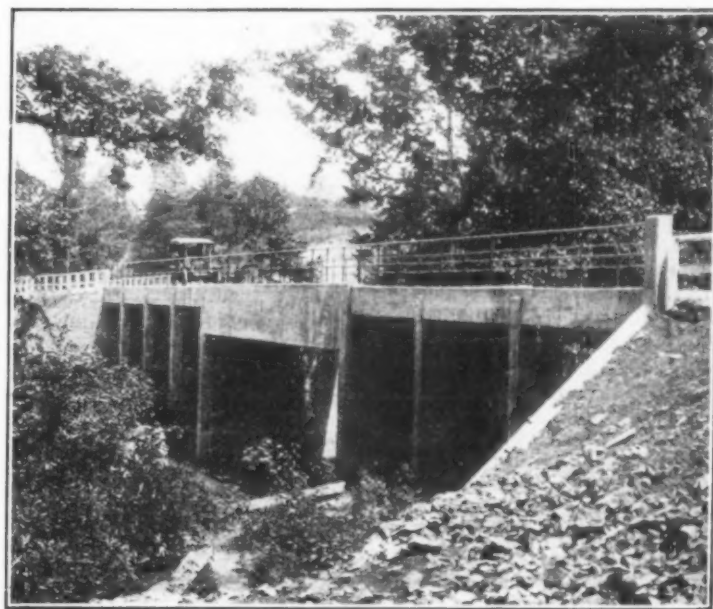
ANSON MILLS OFFICE BUILDING, EL PASO, TEX. REINFORCED CONCRETE THROUGHOUT.



REINFORCED CONCRETE BRIDGE NEAR SAN ANTONIO, TEX.



MAYO BUILDING, TULSA, OKLA.



REINFORCED CONCRETE BRIDGE NEAR DURHAM, N. C.

The Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., February 13.

The condition of the local pig-iron market at the close of last week's business could not be considered entirely satisfactory to all parties concerned, owing to the persistent rumors to the effect that a concession from the established schedule of \$11 per ton Birmingham had been made in

a certain quarter. All efforts to locate any tangible evidence of the supposed weakness were futile, and the sales reported to have been made at figures around \$10.75 per ton Birmingham could not be confirmed; however, the tonnage that was booked at a strictly \$11-per-ton schedule is comparatively small in the aggregate. It is believed that any concessions that might have been made were for spot ship-

ments only, and that the producing interests as a whole are no more disposed to enture advanced deliveries at the prevailing prices than they were one week ago. So far as can be ascertained, no local producer has opened books for deliveries after July 1, and it is known positively that the \$11 Birmingham basis would not be accepted by all concerns for shipments running even through the remainder of the

first half. The sales that have been recently reported at the \$11 schedule consist largely of comparatively small lots for shipment within 60 to 90 days. As has been mentioned previously, there is a decided shortage in this market for grades below No. 4 foundry, and for high-silicon iron. Such a shortage has become so pronounced within the past 10 days that gray forge is being offered at No. 4 foundry

prices, while a comparatively small lot of 4 per cent. silicon iron recently sold at \$12.25 per ton f. o. b. cars at furnace. The inquiries now pending, which come from practically all quarters of the trade, represent quite an attractive tonnage, with the buyers manifesting considerable interest in deliveries through the remainder of this year. A recent offer of a round tonnage for shipment over the remainder of this year was not given serious consideration, and price named could only be considered nominal.

Local producers of cast-iron water pipe report a fairly active market during the past week, with the average of prices received higher than during the week previous. The most significant letting of recent date covered some 2500 tons of water pipe for the requirement at the city of Minneapolis, Minn. The actual figures at which this tonnage was placed are not made public. The production continues at a rate considerably below normal, two of the Southern plants being closed down, but the outlook is such that an early resumption of operations at the idle plants is generally anticipated. Among the contracts now in sight, the most attractive is the requirement of the city of Chicago, which is understood to come up for placing at an early date. The amount of this requirement has not been learned, but the smaller orders for maintenance work and for extension that are now being considered are quite attractive in the aggregate. An advance of \$1 per ton in quotations is believed to be warranted, and we quote revised prices as follows per net ton f. o. b. cars here, viz.: Four-inch to six-inch, \$21; 8-inch to 12-inch, \$20; over 12-inch, average \$19, with \$1 per ton extra for gas-pipe.

The aggregate of old material moved during the past week was somewhat smaller than the movement during the week just previous, but the status of prices is practically unchanged. There has been considerable demand for light cast and machinery scrap, while the consumers of steel grades manifest more interest than for some time past. Dealers' asking prices were unchanged at the following for the several grades f. o. b. cars per gross ton, viz.:

Old iron axles, \$14 to \$14.50.
Old iron rails, \$12 to \$12.50.
Old steel axles, \$14 to \$14.50.
No. 1 railroad wrought, \$12 to \$12.50.
No. 2 railroad wrought, \$9 to \$9.50.
No. 1 country, \$7.50 to \$8.
No. 2 country, \$7 to \$7.50.
No. 1 machinery, \$9.50 to \$10.
No. 1 steel, \$10 to \$10.50.
Tram car wheels, \$9 to \$9.50.
Standard car wheels, \$10 to \$10.50.
Light cast and stove plate, \$8 to \$8.50.

The market for foundry coke continues about the same as previously reported. High-grade Alabama coke and the cokes from Virginia and West Virginia for foundry purposes are in demand, and continue to bring good prices. The market for furnace coke, however, is absolutely without feature.

The steam coal market is extremely quiet, due largely to the increased rate of production over previous seasons, as well as the fact of heavy receipts at Southern points from Kentucky and Illinois fields. It is a fact that the movement of coal from this district to New Orleans and Mobile has within the past three weeks practically stopped.

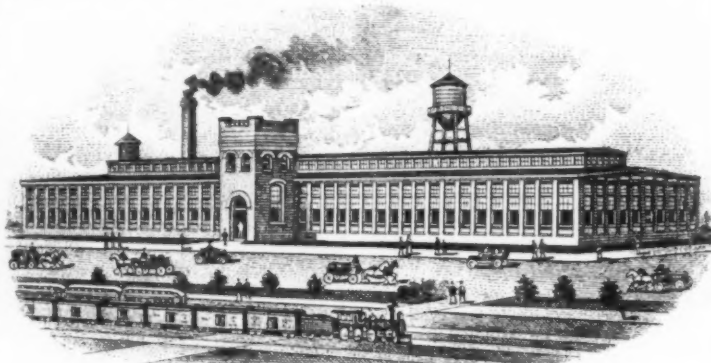
A \$100,000 Wagon Factory.

The Birmingham Buggy Co. will build a modern wagon factory at Avenue E and 18th street, Birmingham. The cost will be about \$100,000, and the plant is to be built during the next six months.



SHROPSHIRE APARTMENT-HOUSE.

To be erected at San Antonio, Tex.; cost about \$250,000 without mechanical equipment; 76x150 feet; reinforced concrete fireproof construction throughout; steam-heating plant; electric plant for lighting, fuel and elevators; automatic electric elevator; electric cookers; marble wainscoting; telephones; centrifugal water-cooling system; hot and cold water; electric vacuum cleaner; garage; bowling alley; children's playground; observation tower 75 feet high; 225 living-rooms; 75 private baths; 10 public baths; owner, Dr. L. L. Shropshire; architect, Brown-Lamberth Company; both of San Antonio.



JEWEL COTTON MILLS, THOMASVILLE, N. C.

This plant, recently completed, will manufacture fine combed yarns; it has about 5000 spindles, with accompanying machinery, in a 78x308-foot building; brick and cement construction; all floors of pitch concrete; machinery driven by electricity transmitted from Southern Power Co.'s Great Falls (S. C.) development, 117 miles distant; Jewel company was incorporated with \$250,000 capital stock; J. L. Armfield, president; W. W. Hagood, vice-president; T. J. Lillard, secretary-treasurer.

A \$300,000 Electric Plant.

The Consolidated Gas, Electric Light & Power Co. of Baltimore will invest about \$300,000 for the construction and equipment of a large storage-battery plant. It will expend about \$50,000 for the building and about \$250,000 for the mechanical equipment. Referring to this plant, Herbert Wagner, vice-president of the company, is quoted as follows:

"This storage battery will have a capacity sufficient to take care of the peak load in the entire business district for nearly half an hour, should an accident occur at the time of maximum consumption. Should an accident occur at any other time, the battery would take care of the entire business district for several hours, and might be able to take care of the entire city for that length of time. Naturally, the forces of the company would not be idle in event of an accident, and it is scarcely probable that the accident could not be repaired before the storage battery ran out.

"The expenditure of this amount by the company is made solely as an insurance precaution against a break in the service, and is not made with any view to cutting down the cost of production at the peak-load period each day by storing up the

current in the light-load period each day.

"We expect to have the plant in operation inside of six months. We have not yet made arrangements for the purchase of the battery, the plans for which have been prepared by our engineers, but will ask for bids shortly from the leading manufacturers of storage batteries."

Advertising the South.

As the result of exhibits made by the Southern Railway and affiliated lines at various fairs and expositions in the North and West last fall, the land and industrial department of the Southern has the names of several thousand people who are interested in the South with the view to looking for homes. The exhibits were viewed in the aggregate by over a half million people, according to reports just compiled by the land and industrial department of the Southern. In addition as large a number visited the exhibit of the South and its resources made jointly at the Ohio Valley Exposition in Cincinnati by the railroads of the Southeast.

It is reported that 47 farmers from Indiana, Illinois and Iowa have purchased for \$197,000 about 3000 acres of land near Jeanerette, La.

For Graham Improvements.

Mayor V. L. Sexton of Graham, Va., writes to the MANUFACTURERS RECORD that an ordinance has been passed by the Council of the town of Graham calling for an election by the qualified voters on the question of a municipal bond issue. The amount of the bonds proposed to be issued aggregates \$45,000, of which \$20,000 are to be used in the erection of a public school building for the town. This amount will be supplemented by \$10,000 from the literary fund of the State; \$15,000 of the fund, or so much thereof as may be necessary, will be applied to the improvement of the water-works system of the town to obtain purer water. The balance of the issue will be devoted to the improvement of the streets and sewerage.

Application will be made on February 20 to the judge of the Circuit Court of Tazewell county to order an election submitting the question to the voters of the town. This election will be called some time after 30 days from February 20. Mayor Sexton is of the opinion that the voters of the town will practically be unanimous in favor of the issue. The county of Tazewell will probably at the same time present a petition to the Circuit Court asking for a bond issue of \$500,000 for the permanent improvement of public roads in the county. If this fund is decided to be divided based upon the proportion of the taxes paid by each district of the county, the Clear Fork magisterial district, wherein the town of Graham is situated, will receive 46 per cent. of the amount of the bond issue. The town of Graham under the issue outlined, the property of said town being subject to tax under the bond issue, and the voters of the town participating in the bond issue election, the town has arranged to get from the county issue in the way of improvements, within the corporate limits, about five miles of macadam road 12 feet wide, or two and one-half miles 24 feet wide. These roads will all be built under State supervision, and will cost approximately, for a road 12 feet wide, an average of \$4500 a mile."

Texas Oranges.

[Special Cor. Manufacturers Record.]

San Antonio, Tex., January 19.

Southwest Texas agricultural land sold the other day for \$1000 per acre. Ten years ago this same tract could have been bought for \$2.50 per acre. The tract sold consisted of 10 acres devoted to an orange orchard located near League City, and is known as the Yarborough orange grove. Three and a half acres are bearing Satsuma orange trees, six acres of two-year-old trees and almost one acre devoted to one-year-old budded stock. The improvements consist of a two-room house and a small barn. Last year the former owner sold \$650 worth of oranges from one acre. It is estimated by those in position to know that this season's yield will net at least \$2000. It is also predicted that within a period of two years this orchard will pay from \$800 to \$1000 per acre. There are hundreds of such orchards in Southwest Texas, and the sale of the foregoing has started a stiff advance in the price of orange land and gives the assurance that Southwest Texas has made good as one of the orange-producing sections of the continent.

The Blowing Rock Line, Inc., of Lenoir, N. C., has been chartered to transfer passengers, baggage and freight between Blowing Rock and Lenoir by means of wagons, carriages, automobiles or other vehicles; capital from \$400 to \$50,000. L. P. Henkel, C. V. Henkel and others are the stockholders.

Vigorous Hugo.

Chamber of Commerce,

Hugo, Okla., February 2.

Editor Manufacturers Record:

Hugo located five small plants in the year 1910, floated a \$50,000 hotel company to build a modern hotel building, organized a county fair association, giving the first annual fair of Southeast Oklahoma. Hugo has completed and placed in operation a water-works system costing \$200,000 and drawing its water from a mountain stream seven miles distant; installed a modern sanitary sewer system, costing \$200,000, and initiated a movement to secure a Federal court for Southeast Oklahoma and a Federal building. There were 22 commercial brick buildings erected in 1911 and over 300 residences.

Few, if any, municipalities in any State in the Southwest of like size and resources will show the splendid condition Hugo is exhibiting to the public. Though less than eight years old, the city has made remarkable progress in city attainments.

The Frisco Railroad Co. has completed at Hugo a fine passenger station at a cost of \$40,000. It has also fitted out complete roundhouse and shop facilities.

A project has been launched to build a railroad into the northwest country out of Hugo, which at the present time has no facilities of that kind.

The country contiguous to Hugo is a splendid agricultural and mineral country, every crop common to the temperate or semi-tropical climates thriving there. Hugo is in the rain belt, and there has never been known a crop failure in that country.

PAUL B. BIGGER,

Secretary.

Greenville Improvements.

Board of Trade,

Greenville, S. C., February 11.

Editor Manufacturers Record:

Greenville's bank capital has been increased during this year \$105,000 by the increases in the People's Bank and the Brandon Savings Bank.

City Council has an ordinance under consideration which, if passed, will no doubt cause many electric signs to be erected in the city.

A fire-alarm system at a cost of \$8300 will be installed within the very near future.

Four of the six miles of additional sewerage which the city is placing at this time has been completed.

The Greenville Mantel & Manufacturing Co., a new concern with \$25,000 capital stock, has completed its building and will receive its machinery during the next few days.

A large private sanitarium has been purchased by those of the city who are interested in establishing a city hospital at the cost of \$20,000. Some improvements will be made in the structure, and Greenville will then have a modern hospital.

The General Assembly has enacted a law permitting Greenville to assess the abutting property-holders of the city for street improvements. Greenville is spending \$500,000 in street and sewerage work today, and now it is expected that all of the main streets of the city will be paved with the best of pavement during the coming year.

E. B. ADAMS, Secretary.

Wants Factories.

Progressive League,

Marshall, Tex., February 7.

Editor Manufacturers Record:

Marshall wants more woodworking plants, and at this time desires a spoke and handle factory as well as a wagon factory. Having cheap natural gas and an unlimited supply of timber, it feels as if it were the logical point for such factories.

W. L. PIRTS, Secretary.

To Irrigate 24,000 Acres.

[Special Cor. Manufacturers Record.]

Houston, Tex., February 3.

Randall-Lovegrove-Wyman, consulting and constructing engineers, of this city, have in hand plans for the irrigation of a tract of 24,000 acres at Monte Christo, 10 miles north of Mission, Tex. The plan of development includes a 2,500,000-gallon reservoir, which has already been constructed at the highest point of the tract, which will supply the entire 24,000 acres with water by gravity. There are four artesian wells on the tract, which number will be increased to such an extent as is necessary to provide water for the irrigation of the entire tract. The plan includes the establishment of a central pumping plant, and all wells will be operated by compressed air from the central power plant, which is an unique departure, and which provides for a particularly economical operation. The owners of the tract are Houston capitalists, organized under the name of the Melado Land Co. It is proposed to sell the tract in units to suit purchasers. The company is establishing demonstration farms on the tract, having already planted citrus fruits, pecan trees, cotton, corn, truck, etc., with the purpose of demonstrating that a wide variety of agricultural and horticultural product is adapted to these lands.

ALBERT PHENIX.

North Carolina.

A handsome and well-illustrated booklet descriptive of the agricultural resources and products of North Carolina has just been issued by the land and industrial department of the Southern Railway for distribution in the North and West in connection with the work which the Southern is doing in the effort to attract desirable settlers to the Southeast. The volume is the fourth in a series on the different States traversed by the Southern. It is not for circulation in the South, but will be given a wide distribution in sections where it is believed the greatest good can be accomplished. Any citizen of North Carolina or any other Southern State who wishes this publication placed in the hands of a friend or acquaintance in any locality in the North or West may have this done by sending the name and address of such friend or acquaintance to M. V. Richards, land and industrial agent, Washington, D. C.

Yorktown Chemical Works.

Buildings to cost \$50,000 for the plant of the Yorktown (Va.) Chemical Works will be constructed by the American Cement Engineering Co., 315 Fifth avenue, New York. They will be of mill construction type, and the installation of tanks, boilers, engines, grinding machinery, etc., will be proceeded with as soon as practicable. This company was recently incorporated with a capital stock of \$300,000, and F. H. Johnson is president.

Consolidated Phosphate Co.

The Consolidated Phosphate Co. of Columbia, Tenn., has filed articles of incorporation and will develop 4500 acres of phosphate lands in Maury, Lewis, Hickman and Giles counties, Tennessee. The incorporators are George W. Killebrew, John W. Fry, E. D. Smith, H. F. Alexander and Geo. E. McKennon.

An address delivered recently before the first annual convention of the Oklahoma Municipal League by Mr. Alexander Potter, consulting engineer of New York city, on the State, the city, the riparian owner and their sanitary inter-relation, a question now engaging widespread attention, has been published in pamphlet form.

GOOD ROADS**WEEK'S HIGHWAY RECORD.****Progress in Southern Road and Street Improvement.**

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Grapeland, Tex.—Houston County Precinct No. 5 voted bonds for construction of roads.

Waverly, Va.—City voted on issuance of \$7000 of bonds for street improvements, etc.

Bonds to Be Voted.

Brownsville, Tex.—City will vote March 14 on issuing \$80,000 of bonds for paving.

Graham, Va.—City will vote on issuing \$10,000 of bonds for street improvements and sewer construction.

Lebanon, Va.—Russell county voted February 14 on issuing \$275,000 of bonds for road improvement and construction.

Memphis, Tenn.—City will petition Legislature for authority to issue \$750,000 of bonds, of which \$500,000 will be for continuing street improvements.

Pittsboro, N. C.—City will vote March 11 on issuing \$5000 of bonds for street improvements.

Sumter, S. C.—City voted February 14 on issuing \$25,000 of bonds to pave business streets.

West Palm Beach, Fla.—City will vote March 21 on issuing bonds for \$55,000 to improve streets, etc.

Contracts Awarded.

Elizabeth City, N. C.—City awarded contract for paving streets with asphalt.

Mendenhall, Miss.—Simpson county awarded contracts for various road improvements, for which \$40,000 was available.

New Orleans, La.—City awarded contract at about \$18,524 for constructing subsurface drains, curbs and gutter bottoms, at \$7533 for other drains, curbs, etc.; at about \$19,000 to repave street with bitulithic, and at \$8688 for asphalt paving.

Palatka, Fla.—City awarded contract for constructing 1700 square yards of granolithic sidewalks.

Portsmouth, Va.—Road Commission awarded contract at about \$11,800 for macadamizing two miles of road.

Tampa, Fla.—Hillsboro county awarded contracts for constructing one and one-half miles of road.

Contracts to be Awarded.

Clinton, Miss.—City will lay a five-foot concrete sidewalk one-half mile long.

Dallas, Tex.—Municipal Commissioners will invite bids for about 20,000 square yards of paving and about 6000 feet of curbing and gutters, to cost about \$30,000.

Easton, Md.—Talbot and Caroline counties will receive bids until February 27 for grading, macadamizing, constructing drawbridge, etc.

Eutaw, Ala.—City will receive bids until February 27 for constructing 8500 square yards of macadam street paving, 2850 linear feet of cement curbing and 2150 square yards of cement sidewalks.

Fort Worth, Tex.—City received bids until February 15 for macadam, bitulithic, etc., paving on two streets.

Harrisonburg, Va.—Rockingham county received bids until February 16 for constructing three miles of macadam road.

Helena, Ark.—City will pave streets.

Jacksonville, Fla.—Duval county will receive bids until February 24 for road-

grading, and on same date for paving a portion of an avenue.

Macleenny, Fla.—Baker county will construct hard-surface roads.

Meridian, Miss.—Good Roads Commissioners have adopted plans and specifications for constructing two roads.

Oklahoma City, Okla.—City will receive bids until February 20 for grading and paving.

Portsmouth, Va.—City will invite bids for paving various streets.

Roland Park, Md.—Baltimore Suburban Sewerage Co. will construct a four-mile boulevard, macadamize and oil and supplement it for about three miles by a driveway 20 feet wide with sidewalks 30 feet wide on each side.

Selma, Ala.—Dallas county will invite bids for constructing 20 miles of road.

Spottsylvania, Va.—Board of Public Roads will open bids March 6 for constructing one and three-quarters miles of macadam roads.

St. Louis, Mo.—Board of Public Roads will receive bids until February 21 for vitrified-brick paving on various streets, asphalt reconstruction on others, pine block and bitulithic paving, etc.

Tulsa, Okla.—City will readvertise for bids on paving Hodge street.

Waycross, Ga.—City plans to pave sidewalks, at first inviting bids for 10,000 yards of concrete paving.

In an Auto Highway.

[Special Cor. Manufacturers Record.]

San Antonio, Tex., February 9.

Williamson county, which has already spent \$200,000 in building macadam roads, is asking its county commissioners to authorize the issuance of \$100,000 additional highway bonds. With the additional sum asked for, a straight macadam road will be built from Elgin, on the Bastrop county line, through Williamson county to the line of Bell county, a distance of about 75 miles. This is one of the unfinished links in the auto highway between San Antonio and Corpus Christi. With the completion of two or three other short stretches this road will be finished and so complete in its construction that automobiles may maintain 25 miles an hour speed. The effort now on in Williamson county is but one of the many in the southwest section of the State, where the people have taken hold of road-building with a determination that means the best auto highways in the United States.

The First National Bank of Greenville, Miss., is circulating an interesting and valuable report entitled "The Truth About the Boll-Weevil," made by Messrs. Alfred H. Stone and Julian H. Fort of Dunleith, Miss., as a result of observations by those two gentlemen, who combine a practical experience of many years in cotton planting on a large scale with a wide familiarity with general economic conditions in the cotton belt, of cotton-growing under boll-weevil conditions in certain areas of Louisiana, Texas and Mississippi.

The report of the proceedings of the Alabama Good Roads Association at its meeting at Birmingham last October has been published by Secretary J. A. Rountree of Birmingham in attractive pamphlet form, and reveals the interest in the State in the subject of improved highways that is already having such effective results.

An address on depreciation as applied to water-works properties made by Morris Knowles, C. E., of Pittsburg, before the Pennsylvania Water-Works Association, has been published in pamphlet form.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

WASHINGTON TO NORFOLK.

Efforts Directed Toward Construction of a Direct Line of Railroad.

An interesting report from Richmond, Va., which is as yet unconfirmed, is that plans are in progress, backed principally by foreign capital, to build a railroad to connect Washington, D. C., with Hampton Roads, Va., by a direct route via Fredericksburg, Saluda, Gloucester Point and Yorktown, Va. The idea is to make a fast rail route between Norfolk and the North and East via Washington, one which will be 62 miles shorter than any existing route. One of the backers of the enterprise at Richmond is quoted as saying that those interested have the money to build the road, and that it will be constructed. Surveys are being made, and as soon as they are finished the work is to begin. It will require from two to two and a half years to complete and put the road in operation.

With reference to this matter a report from Newport News says that about five years ago a survey was made for such a plan and French and English capital was interested, but the panic sidetracked the enterprise. About a year and a half ago a charter was obtained by others and a partial survey was made. Richard Armstrong is now quoted as saying that the movement is not dead, and that he and associates hope soon to show results for their efforts.

New Equipment, Rails, Etc.

The Central of Georgia Railway is reported to have ordered from the Standard Steel Car Co. 250 steel underframes for cars which it will build in its own shops at Macon.

The Brinson Railway's order for 50 box cars is reported placed with the American Car & Foundry Co. of St. Louis.

The Florida East Coast Railway, says a market report, has ordered five Pacific-type locomotives from the American Locomotive Co., New York.

The Louisville & Nashville Railroad is reported to have ordered 3000 tons of bridge steel from the Cambria Steel Co., Cambria, Pa.

The Norfolk & Western Railway is said to have placed an order for 2000 tons of steel with the McClintic-Marshall Construction Co., Pittsburg, Pa., for a viaduct.

The Atlanta & West Point Railway has ordered 100 flat cars from the American Car & Foundry Co.

The Pennsylvania Railroad will build several additional electric locomotives at its own shops for the New York tunnel service. As in the case of the engines now used, it is expected that the Westinghouse Electric & Manufacturing Co. will furnish the electric machinery. The railroad company also purposes building at Altoona 1000 gondola cars, 50 passenger cars for suburban service, 9 dining-cars and 7 postal cars.

The 15,000-ton rail order of the Chesapeake & Ohio Railway was divided between the Illinois Steel Co., Chicago, and the Maryland Steel Co., Sparrows Point, Md. Some will be 90 and some 100-pound sections.

The Electric Power Co., Vicksburg, Miss., is reported in the market for two passenger cars complete.

The Kanawha & Michigan Railway is reported to have ordered eight consolidation locomotives and two six-wheel switchers from the American Locomotive Co.

The Brookhaven Country Club, Atlanta,

Ga., is in the market for about two and a half miles of second-hand 80 or 90-pound T rails for a gasoline motor car line. V. H. Kreighshaber is chairman, Forsyth Building, Atlanta, Ga.

The South Covington & Cincinnati Street Railway of Covington, Ky., is reported to have ordered 15 semi-convertible car bodies from the Cincinnati Car Co., Cincinnati, O.

The Texas City Transportation Co. has ordered a mogul locomotive from the American Locomotive Co.

The Marion & Rye Valley Railway is reported to have ordered a consolidation locomotive from the American Locomotive Co.

The Norfolk-Southern Railroad is reported to have bought four 36-foot semi-convertible passenger and smoking cars from the J. G. Brill Company, Philadelphia.

The Citizens' Railway, Waco, Tex., says a report, has ordered five semi-convertible cars, each 20 feet 8 inches long, from the Danville (Ill.) Car Co.

The Shreveport Traction Co., Shreveport, La., has ordered five closed cars, each 28 feet 10 inches long, from the American Car Co.

The Central Kentucky Traction Co. of Frankfort, Ky., is reported to have purchased a 50-foot baggage car from the American Car Co.

George Wehner, 420 Habersham street, Savannah, Ga., will, it is reported, purchase gasoline motor cars, which will be used between Savannah and Tybee Island.

An equipment agreement has been filed at Mobile, Ala., for the purchase of 50 gondola cars by the New Orleans, Mobile & Chicago Railroad from the American Car & Foundry Co.

A dispatch from Brownsville, Tex., says that the Rio Grande Railroad will rebuild its equipment at the shops of the St. Louis, Brownsville & Mexico Railway at Kinsville.

The Northern Texas Traction Co., Fort Worth, Tex., will, it is reported, purchase about 50 cars.

A Trackless Trolley Plan.

The Trackless Trolley Co. of Maryland & West Virginia, recently organized with \$100,000 capital, has, according to information received, opened an office in Hagerstown, Md., and will apply for a franchise in Martinsburg, W. Va., to immediately put about four miles of line in operation. Several other lines are under consideration, including one or two out of Martinsburg and one or two out of Hagerstown to nearby towns.

The trackless trolley system of transportation for freight or passengers requires a power plant to furnish electricity and overhead construction to convey the current through the trolleys to the motors on the vehicles, but no tracks are necessary. It has been used in different parts of Europe for several years. Electric motor omnibuses are employed, and by means of flexible connection with the trolleys they are enabled to move from side to side on streets or roads, to turn out of the way of other vehicles and within certain limits (restricted only by the length of the trolley connections), to have all the freedom of movement enjoyed by automobiles. The cars to be used by the new company will, it is said, be equipped with mechanism that affords perfect motive power, while it avoids skidding and slipping. They will be lighted and heated by electricity; they are also easy riding and in other respects attractive. The cost of installing and operating is said to be much less than other systems of trolley transportation. The officers are L. N. Downs of Hagerstown, president; H. L. Kirby, secretary, and Wm. P. Grove, treasurer,

both of Harper's Ferry, W. Va. O. D. Bowers of Hagerstown and M. L. Montague of Martinsburg are also directors.

An Educational Train.

A three days' trip of the first farmers' educational train ever operated by the New York, Philadelphia & Norfolk Railroad was made last week on the Eastern Shore of Virginia. Some 800 people attended the lectures. Stops were made at New Church, Bloxom, Onley, Belle Haven, Keller, Bird's Nest and Cape Charles. W. C. Sproul, one of the largest potato growers in Virginia, gave the farmers the benefit of his experience and answered many questions put to him by the Eastern Shore people. Much of the success of the trip was due to the efforts of J. J. Owen, director of institutes of the Department of Agriculture of Virginia, and to the co-operation of G. W. Koener, commissioner of the department. Mr. Owen accompanied the train three days, and made short talks to the farmers, explaining the work of the department of agriculture.

Those who attended the lectures were farmers who are today among the largest producers of peas, strawberries and potatoes. On the New York, Philadelphia & Norfolk Railroad during the year 1910 more than 3,000,000 barrels of Irish and sweet potatoes were shipped, while the shipments of peas amounted to 50,000 baskets, and strawberries over 16,000,000 quarts. The producers of these large crops are all scientific farmers, and they showed their desire to learn any new methods that would enable them to become more intensive in their farming. The railroad, in undertaking to further the interests of the country through which it operates, is co-operating with the departments of agriculture and State experiment stations. In addition to running farmers' educational trains, efforts are being made to induce people to move to the Delaware, Maryland and Virginia peninsula and to secure the location of industries in that territory.

Representing the railroad on the farmers' train were Superintendent Elisha Lee, Division Operator King and Trainmaster Restine.

Fort Worth to Jacksboro, Tex.

A movement has been started at Fort Worth, Tex., to build a railroad from there northwest to Jacksboro, 60 miles, and perhaps farther into New Mexico. William Capps, I. H. Burney, Ed. Farmer, S. D. Lary, Sam Davidson, C. I. Dickinson and W. D. Reynolds were appointed a committee to make plans and get subscriptions for a construction company with \$500,000 capital to build the line. Already \$160,000 of subscriptions made for another company for the same enterprise have been turned over to the new movement. Wm. Capps is reported as saying that active arrangements for the work will be made immediately.

If built to Jacksboro the proposed road will connect there with the Gulf, Texas & Western Railway, which has been completed within the last two or three years from there to Seymour, Tex., 75 miles northwest, and in the very direction which the Fort Worth enterprise is designed to take. It appears probable that an arrangement will be made between the two roads for direct train service to and from that city. Liberal subscriptions for construction are anticipated. The line will traverse a rich agricultural region, and will also reach coal mines in the vicinity of Jacksboro.

St. Louis-Kansas City Electric.

A press dispatch from Columbia, Mo., quotes President D. C. Nevin of the proposed St. Louis & Kansas City Electric Railway as saying that bids for construc-

tion will be in within a month, and that the construction company will begin actual work as soon as possible thereafter. The work will be divided into two sections, one between Columbia and St. Louis and the other between Columbia and Kansas City. Perhaps the line between the latter points will be started first.

President Nevin is further reported as saying that the railroad owns 18,000 acres of coal lands in Boone and Howard counties, and, as heretofore reported, it is the intention of the company to erect its power plant adjacent to the coal mines, so that power may be produced at the lowest possible cost. The company will also be prepared to sell power in all towns along its line, even the large cities, and at low prices.

Out of Hugo Northwest.

Paul B. Bigger, secretary of the Chamber of Commerce, Hugo, Okla., writes that the Hugo & Atoka Northwestern will probably be the name of the railroad which it is proposed to build, although the route may be changed and the line run via Reynolds instead of Atoka. At present it is intended to build 50 miles from Hugo northwest, which will include two bridges, one of steel and the other of piling. The country is part prairie and timber, and the rest broken. Bonuses from towns will determine the exact route. Four surveys are being made. Connections will be made with the Missouri, Kansas & Texas Railway and the Santa Fe.

The company will be organized within the next few weeks. The bonus features are just being prepared, with townsite privileges, etc. The road will be built by local capital under the leadership of the Chamber of Commerce. Col. C. C. Godman of Fort Smith, Ark., will be the builder of the line, and in all probability its general manager.

Coal & Coke Rumors Denied.

The recent press reports that the Baltimore & Ohio Railroad Co. was contemplating the acquisition of the Coal & Coke Railway are denied at the Baltimore & Ohio headquarters in Baltimore. It was stated that President Willard's trip over the Coal & Coke had nothing to do with a deal for the property.

The Coal & Coke is one of those roads whose future affords matter for speculation. It was built by ex-Senator Henry G. Davis and associates, and it includes the line formerly known as the Charleston, Clendennin & Sutton Railroad, thus forming a through route between Elkins and Charleston, W. Va. Mr. Davis took up the proposition about the time that the West Virginia Central, in which he was interested, was acquired by the Western Maryland, and the new road connects with the latter system. It would be of quite as much use to the Western Maryland as to any other road, especially for a through route between Baltimore and Charleston. It traverses a region rich in coal and timber. The distance from Elkins to Charleston is 175 miles, but, including branches, the road has about 200 miles of track.

Railroad Along the Cheoah River.

An officer of the company writes that the Graham County Railroad is to be built from Topton via Robbinsville to Slick Rock, N. C., 43 miles. The survey is not yet complete. Connection will be made with the Southern Railway on the Little Tennessee River. The route of the new road is through rolling country along the Cheoah River. Date has not yet been fixed to receive bids for construction. The directors include Duff Merrick, president, Asheville, N. C.; George B. Walker, vice-president and treasurer, Robbinsville, N.

C.; Alf S. Barnard, secretary, Asheville; R. B. Slaughter and D. W. Swan of Robinsville. D. B. Burnes is chief engineer.

Blakely Southern.

One of the organizers of the Blakely Southern Railroad Co. writes from Thomasville, Ga., that the proposed line is from Blakely, on the Central of Georgia Railway, due south to Jakin, Ga., on the Atlantic Coast Line, 22 miles. The route is through level country, and there are no large towns. Bids will not be invited for the work, but contracts will be let locally. Application has been made for charter, but it will not be issued for about two weeks, though it is understood that W. C. Snodgrass of Thomasville will be president of the road; J. A. Mitchell, vice-president and general manager, others interested being W. I. MacIntyre, W. D. Hargrave and others.

Electricity from the Susquehanna.

The United Railways & Electric Co. of Baltimore has closed a contract with the Pennsylvania Water & Power Co. for a supply of electric current from the large hydro-electric plant at McCall's Ferry, Pa. This will provide the company with only part of the electricity it requires to operate its street cars, so that the big power-house will have to be maintained and kept in service. The advantage which the supply from the plant on the Susquehanna River will convey will be in rendering it unnecessary to build additions to the power plant in Baltimore to meet the demand resulting from growth of traffic and extension of lines.

An Oklahoma Interurban.

W. E. Rohde, general manager, Tulsa, Okla., writes that the Sand Springs Interurban Railway will be seven miles long from Sand Springs to Tulsa along the Arkansas River. One 30-foot steel bridge will be required and about 120 feet of trestling. The route is mostly level. Connection will be made with the Frisco and the Missouri, Kansas & Texas railroads. Either electric or gasoline motor cars will be used. The incorporators and directors are Charles Page, president and treasurer; W. E. Page, vice-president; W. E. Rohde, general manager; C. F. Tingley, secretary, and E. D. Forguer.

New River Power Plans.

H. R. Leyden, a consulting engineer, says a report from Bluefield, W. Va., has visited there recently, representing the New River Power Co., 49 Wall street, New York, which, as recently reported, has an option on the property of the Bluestone Traction Co. He is said to be making a complete investigation in Bluestone and the surrounding country of the various properties which the company has in view. The idea appears to be for the establishment of an extensive power and light plant, with probably some electric railway extensions through the regions around Bluestone.

A New Railroad President.

Dispatches from Macon, Ga., say that James A. Blair, Jr., has been elected president of the Macon, Dublin & Savannah Railroad, a Seaboard Air Line property, succeeding Homer Loring of Boston. He is the son of James A. Blair of Blair & Co., New York, who are interested in the Seaboard.

Contract Awarded.

Contracts for grading and masonry on the proposed Buckhannon & Northern Railroad between Rivesville, W. Va., and the Pennsylvania boundary, 32 miles, are reported let to Patterson, Moran & Luck, Fitzsimmons Building, Pittsburg, Pa.

This part of the route will be constructed under the charter of the State Line & Southern Railroad, which was formed for the purpose. Samuel D. Brady, Fairmont, W. Va., is chief engineer. The contract is to be completed by December 1 next. Separate contract will be let for the bridges and track. Some subcontracts are expected on the grading.

Demopolis to Linden, Ala.

President A. R. Smith of the Birmingham, Demopolis & Pascagoula Railroad Co. writes from Demopolis, Ala., that it is intended to build 17 miles from Demopolis to Linden, Ala., thus making connection from the Southern Railway to the Louisville & Nashville Railroad. This will include one bridge over Chicasee Bayou. The route is through level country. It is expected to begin construction in about 60 days, and bids will be advertised for shortly. The other officers are J. L. Marx, treasurer; M. C. Webb, secretary; Woolsey Finnell, chief engineer.

New Orleans Southern.

President C. D. Warren of the New Orleans, Fort Jackson & Grand Isle Railway (New Orleans Southern) writes from Toronto, Canada, confirming report that he and others have acquired control of the property, but says that no plans are yet matured concerning it.

The present line of road is from New Orleans to Buras, La., on the Mississippi River, about 60 miles below the city. It follows the stream nearly all the way. To reach Grand Isle a branch from 25 to 30 miles long will have to be built southwest from a point on the main line.

Will Widen the Present Bridge.

An official letter from the Norfolk & Western Railway Co. says that it does not propose to build a new bridge over the Ohio River at Kenova, W. Va. The masonry of the bridge there is built for double track, and the superstructure as originally designed had future double track in view. The tracks are now gauged and operated as double track across the bridge, and the work in view for the year is such as is necessary to provide for full two tracks. The work will be under the supervision of Charles S. Churchill, chief engineer at Roanoke, Va.

Walkersville & Ireland.

The Walkersville & Ireland Railroad Co. is pushing construction on its line from Ireland, W. Va., to the forks of the Little Kanawha River, survey for which was made last year. It will connect with the Coal & Coke Railway at Walkersville. A large force is employed. While the line will at first be narrow gauge, the roadbed is being made standard, so that conversion will be easily accomplished when desired. W. E. Mick is president; W. B. Mick, treasurer, and J. R. Given, chief engineer.

At Port Norfolk and Berkley.

An officer of the Norfolk & Portsmouth Belt Line writes that the only construction being done or contemplated by this company at present is the lengthening of six tracks in its yard at Port Norfolk, being in all about one mile of yard track. The company has just completed about one-half mile of siding track on the Belt Line at Berkley, which was built by the company's forces, who are also doing the work at Port Norfolk.

Proposed Railroad in Virginia.

Channing M. Ward, who has for some time been engaged in the promotion of plans to build a railroad from Doswell, Va., on the Richmond, Fredericksburg & Potomac Railroad, through the Northern Neck to Wicomico, Va., on the Chesapeake

Bay, has made a proposition to the Chamber of Commerce at Richmond that \$150,000 be contributed by that city to the enterprise. Efforts to raise subscriptions have also been made at other points which would also be benefited.

Passing Tracks Completed.

With reference to the report that the Central of Georgia Railway will build five sidings between Macon and Fort Valley, Ga., a distance of 29 miles, an officer writes that it is possible that some additional side-tracks will be constructed in that locality for passing trains, but the matter has not yet been settled. If the work is undertaken it will be done by the company's forces and no new materials will be required.

Mt. Mitchell Railroad.

The Mt. Mitchell Railroad Co. has been chartered in North Carolina to build 10 miles of line from Sevier, on the Carolina, Clinchfield & Ohio Railway, to the headwaters of Turkey Cove Creek, all in McDowell county. Headquarters will be at Woodlawn, N. C.; capital \$10,000 to \$100,000. The stockholders include T. T. Adams of Richmond, Va.; John B. Adams, L. T. Adams and Jordan Thompson of Woodlawn, N. C., and J. W. Plass of Marion, N. C.

Bonds for Improvements.

The Gulf & Ship Island Railroad Co., says a report from Gulfport, Miss., has filed a mortgage to secure \$1,000,000 of 6 per cent. general and refunding 6 per cent. bonds, of which \$500,000 will be employed to care for outstanding indebtedness, and the rest will be used for improvements. President J. T. Jones is quoted as denying rumors that the line will be sold.

Railroad Notes.

The Fairmont & Clarksburg Traction Co. has arranged to sell \$3,000,000 of three-year 5 per cent. notes, the proceeds of which, it is understood, will be used to reimburse the company for its purchase of the Fairmont & Mannington Railroad, which was recently announced, and for the completion of construction under way.

An order has been issued in the United States District Court at Baltimore for the sale of the Washington, Baltimore & Annapolis Electric Railway under foreclosure of the mortgages on the property. The Cleveland (Ohio) Trust Co. is appointed trustee to conduct the sale, which is to take place at Naval Academy Junction, Md., at some date to be set. George W. Williams of Baltimore and George T. Bishop of Cleveland are the receivers.

Porter & Boyd of Charlotte, N. C., have been awarded a contract by the Southern Railway to grade a spur track about three-quarters of a mile long to connect the Westervelt Mills at Greenville, S. C., with the Columbia & Greenville division. Work is to begin immediately, and the contractors will ship grading equipment from Charlotte, as the job will require the removal of about 18,000 cubic yards of earth and a quantity of rock in a cut. The approximate cost of the work is \$7000.

Dispatches from New York report that the Westinghouse Electric & Manufacturing Co. is preparing plans, specifications and estimates for electric work in connection with the construction of the proposed South Atlantic Transcontinental Railroad Co., promoted by Col. S. A. Jones of Waynesville, N. C., for which it is stated that McArthur Bros. will be the general contractors. The company was recently chartered in Tennessee after being organized in North Carolina some time ago.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Hosiery Manufacturing Association.

North Carolina, South Carolina and Virginia hosiery manufacturers met at Raleigh last week and organized the Carolinas and Virginia Hosiery Association. Twenty-eight mills were represented at the meeting, representing 75 per cent. of the mills of the territory. Charles M. Carr of Durham, N. C., was elected president; H. A. V. Parker of Portsmouth, Va., vice-president; Ernest Martin of Raleigh, secretary and treasurer. The advisory board is composed of Charles M. Carr, H. A. V. Parker, C. W. Jeffreys, T. H. Williams and A. McDowell.

The objects of the association are to establish more cordial relations between hosiery manufacturers of the three States and to enable manufacturers to better meet conditions facing the industry.

The Cotton Movement.

In his report for February 10 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight in 163 days of the present season was 9,827,165 bales, an increase over the same period last season of 1,563,716 bales. The exports were 5,770,482 bales, an increase of 1,453,567 bales. The takings were, by Northern spinners, 1,551,839 bales, a decrease of 3535 bales; by Southern spinners, 1,278,988 bales, a decrease of 3253 bales.

National Oilcloth Co.

The National Oilcloth Co. of St. Louis has been incorporated with a capital stock of \$75,000 by William Nesbitt, R. N. Stubbs, James Bennett, Joseph Mattee and George W. Winstead. In February the MANUFACTURERS RECORD mentioned this company as to incorporate and establish a plant with a daily capacity of 24,000 yards of oilcloth.

The Wennonah Mill.

The Wennonah Cotton Mills Co., Lexington, N. C., takes over the Wennonah Cotton Mills, heretofore owned by W. E. Holt, Jr., one of the company's incorporators. This company was reported incorporated last week with \$125,000 capital stock. Its plant has 11,856 ring spindles, 426 broad looms, dyeing equipment, etc.

The Westervelt Mills.

The Westervelt Mills of Greenville, S. C., has awarded contract for the erection of its buildings to the Gallivan Building Co. of Greenville. Details of buildings, dimensions, character of construction and other facts were mentioned last week. As has been announced, the Westervelt company is a \$1,000,000 enterprise that will operate 50,000 spindles and 1200 looms on the production of India lawns and linens.

Basic Woolen Co.

The Basic Woolen Co. of Basic City, Va., has purchased the Blue Ridge Woolen Co., including two two-story buildings 54x150 feet each, with 1000 spindles and 40 looms. From 1000 to 1200 pairs of blankets is the daily output, and 75 operatives are employed. This new company was re-

ported incorporated last week with \$75,000 capital stock.

Nuxol Woolen Co.

The Nuxol Woolen Co. of Louisville has been incorporated with a capital stock of \$35,000 by John W. Nuxol, Martin J. Doll and Benjamin C. Leeming.

Textile Notes.

The Maryville (Tenn.) Hosiery Mills will install additional machinery, and has placed the contract for this new equipment.

Cook Husbands and Dr. Winston of Paducah, Ky., are planning the organization of a company to manufacture waterproof cloth at Chattanooga.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Hardwood Flooring Plant.

Application has been filed by Masters' Patent Floor Co. for a charter, capitalized at \$60,000, the plant to be established at Knoxville. This company will manufacture hardwood floors exclusively under patent recently obtained by John F. Masters of Durham for a special form of floor which eliminates the use of nails in laying floors. This flooring will be bolted together in sections, and as these sections are being laid additional bolts will secure the sections together, making a smooth floor which will not warp by use and changes of temperature, etc.

Several acres of land have been purchased near Knoxville for the factory in an advantageous location.

Work on the plant will begin at once, and it is expected that it will be in operation by spring.

The company consists of John F. Masters of Durham and W. D. Hogan, Eugene Galyon, C. S. Agee and Hazen House of Knoxville.

Rebuilding Chair Factory.

The Cramer Furniture Co., Thomasville, N. C., is taking action toward rebuilding the chair factory recently reported burned, and will proceed with actual reconstruction as soon as contracts are let. There will be five buildings; one of three stories, 50x200 feet; two of two stories, 70x120 feet and 50x60 feet; two of one story, 30x60 feet and 60x60 feet. The buildings will be of mill construction type. Bids for machinery will be opened March 1, and it is expected that the expenditures for the general chair factory equipment, with capacity of 2000 chairs daily, will be between \$25,000 and \$30,000. This company will also purchase engines and boilers for the plant. John T. Cramer is president.

I. E. Hood Lumber Co.

The I. E. Hood Lumber Co. of Birmingham will build one of the largest planing mills in Alabama, with 306 feet frontage on the Atlanta, Birmingham & Atlantic Railroad. The cost of the mill will be from \$75,000 to \$100,000, and an office building and other structures will cost an additional \$100,000. This company is one of the largest lumber dealers in the State, and operates yards at Woodlawn. Besides the planing mill, the company will conduct a general building material and lumber business at that point. About 150 men will be employed at the new plant. The president of the company is I. E. Hood.

The value of miscellaneous crops in Oklahoma in 1910 was \$150,000,000, an increase of \$30,000,000 over 1909.

MINING

Developing Kentucky Coke.

Pikeville, Ky., February 10.

Editor *Manufacturers Record*:

At the request of the Commercial Club of Pikeville I contributed an article to the *MANUFACTURERS RECORD* for publication in your issue of December 29 on Marrowbone coke. Since that writing the Marrowbone Coal & Coke Co. has had a thorough furnace test of the coke made at the furnaces of the Norton Iron Works, Ashland, Ky. The same coke was tested in the cupola of the Ashland Steel Co. Most excellent results were obtained in both tests, and the iron people were delighted with the coke. The Marrowbone Coal & Coke Co. has had such excellent results from the initial shipments of their coke that they now contemplate building 60 more ovens, and have sent an engineer on the ground for estimates. Work is to begin in the early spring. Myself, J. L. Rogers of Greenville, Ky., and Lon Rogers of Lexington, Ky., have bought the property of the Elkhorn Consolidated Coal & Coke Co. at Hellier, Ky., and will begin immediately the work of constructing ovens. It is their plan to build 100 ovens during the present year. The Elkhorn Consolidated property consists of 2500 acres of the best of the Marrowbone coal. The new owners will build an electric power plant capable of running 300 ovens. Survey is now being made, and work of construction will begin by March 15.

LON ROGERS.

Tennessee Oil and Gas.

The State Geological Survey of Tennessee has just gotten out a report on the development of the oil and gas industry in the State. The report, which is short and preliminary in nature, is by Mr. M. J. Munn, oil and gas expert of the United States Geological Survey, and describes the result of work done by him last summer in co-operation with the State survey. It describes the early finding of oil and gas in Overton and Fentress counties, the striking of gushers there, the decline of fields and the abandonment of many of them. Then the counties of Middle and West Tennessee are taken up in order, and the developments of each described. The report does not go at length into the geology of the oil and gas deposits of the State, that being left to a fuller report which it is planned to prepare within the next one or two years.

In the final chapter Mr. Munn discusses the future possibilities of Tennessee as an oil and gas State. Long experience has indicated that the Great Valley of Tennessee, lying east of the Cumberland, is not an oil and gas territory, as drilling from Pennsylvania to Alabama in that belt has universally resulted in commercial failures. He also condemns the rocks of the middle basin of Tennessee as probably non-oil-producing, based simply upon the fact that the rocks occurring in the center of that basin are lower stratigraphically than any rocks that have yet produced oil in commercial quantities. While this is only negative evidence, yet in view of the large number of wells which have been drilled in rocks of that age so far without result, the evidence is not encouraging. The Cumberland Plateau Mr. Munn considered much more hopeful, and especially the western edge and possibly also the Highland Rim region, between the central basin and the Cumberland. The Highland Rim region, in the western part of Middle Tennessee, is also considered to be possibly an oil and gas territory.

In West Tennessee, according to the report, no commercial oil or gas has yet been

obtained, but the conditions are considered as hopeful, especially along the crest of the divide between the Tennessee-Mississippi rivers.

The Durham Company.

An official statement on the Durham Coal & Iron Co. of Chattanooga, whose organization and development plant were announced recently, has been issued to financial interests. It is as follows:

"This company was incorporated at Albany, N. Y., on January 6, and on January 26 took title to the property of the following companies: Durham Coal & Coke Co., Fox Coal Co., Sale Creek Coal & Coke Co., New Soddy Coal Co., Hamilton Coal Co. and Chattanooga Company, Ltd., in all about 60,000 acres of coal and iron lands located some 35 miles from Chattanooga, Tenn. The present annual output of coal, amounting to 500,000 tons, will, we are informed, be increased to about 1,000,000 tons within 60 days by reopening Sale Creek and Graysville mines, and by January 1, 1912, is expected to reach 2,000,000 tons.

"The capitalization is \$1,500,000 of 7 per cent. non-cumulative redeemable preferred stock (\$1,000,000 issued) and \$5,000,000 of common stock (all issued); also \$5,000,000 first mortgage 5 per cent. 25-year sinking fund bonds secured by mortgage to Central Trust Co. of New York as trustee, covering all properties now owned or hereafter acquired. The immediate issue of bonds is for \$3,000,000, for the acquisition of properties and working capital. These bonds were purchased by a syndicate organized and managed by Hallgarten & Co. The company at organization acquired a working capital of \$655,000 cash."

West Virginia Coal in 1909.

In 1909, for the second time in the history of the coal-mining industry, West Virginia produced more coal than Illinois and took second rank among the coal-producing States. This change occurred in a year in which mining operations in either State were not much disturbed by labor troubles. West Virginia outranked Illinois also in 1906, but the production in Illinois was in that year cut down by a long period of idleness caused by a struggle between the operators and the organized mine workers over the wage scale. In 1906 West Virginia's production exceeded that of Illinois by 1,810,246 short tons; in 1909 the difference was 955,969 tons.

The production in West Virginia in 1909 amounted to 51,849,220 short tons, valued at \$44,661,716, against 41,897,843 short tons, valued at \$40,009,054, in 1908.

Illinois has the advantage of nearby markets for its coals, and by far the larger part of the product is consumed within the State or in closely adjacent territory. West Virginia, on the other hand, more than any other coal-producing State, finds markets for its coal outside of the State. The manufacturing industries of West Virginia are comparatively unimportant when considered in connection with its large and cheap supply of high-grade fuel, so that probably more than 50 per cent. of the coal mined in the State is shipped away to support manufacturing industries in other States.

Tennessee Consolidated Coal Co.

G. B. McCormack of Birmingham sends the *MANUFACTURERS RECORD* a statement regarding the Pratt Consolidated Coal Co., of which he is president. Mr. McCormack writes as follows:

"Effective January 1, 1911, the following properties were consolidated under the name of the Tennessee Consolidated Coal Co., with headquarters at Tracy City, Tenn.: Nunley Ridge Coal Co., owned by

the Pratt Consolidated Coal Co.; Tennessee Consolidated Coal Co., owned by E. L. Hampton and associates and Pratt Consolidated Coal Co.; Tatesville coal lands, owned by E. L. Hampton and associates; Brushey Creek coal lands, owned by E. L. Hampton and associates.

"The total acreage thus consolidated is between 25,000 and 30,000, and includes the developed coal mines at Tracy City and those of the Nunley Ridge Coal Co. The capacity of the mines now operated is 1500 tons per day.

"The consolidated property will continue to be operated under the presidency of E. L. Hampton, to whom any inquiries as to plans for further development should be directed."

West Virginia Geological Survey.

The West Virginia Geological Survey has just issued Bulletin No. 2, a volume of 400 pages, constituting a most valuable publication relating to the railway levels and distance tables of the State, in Part I, while in Part II have been gathered into compact form the analyses of all the coal beds of the State. Volume V of the general series on forestry and the woodworking industries of the State, accompanying which is a State map showing in separate colors the approximate areas and location of the virgin forests, cut-over regions and farming lands. This volume is handsomely illustrated, and is of special importance to everyone interested in lumber or in any form of the lumber industry. The price of Bulletin No. 2 is \$1.50 and of Volume V, \$2. The survey's headquarters are at Morgantown, in charge of I. C. White, State geologist.

Rock Spring Coal Co.

The Rock Spring Coal Co., office at 1007 Bank & Trust Building, Knoxville, and plant at Turley, Tenn., has organized with \$150,000 capital stock, and has contracted for electrical haulage equipment for a capacity of 1000 tons per day. Coal lands to the extent of 700 acres have been purchased, and the development will include 40 tenant-houses and the necessary mining machinery. The officers of the company are: R. E. Miller, president; A. W. Jones, vice-president; James J. Keiley, manager, secretary and treasurer. H. J. Merwin is the constructing engineer, with address at the main office.

Kimberly Coal Co.

The Kimberly Coal Co. of Trenton, Ky., is proceeding with the development of its coal property at Kimberly, and will install the necessary machinery for operating a slope mine, the property consisting of about 220 acres. The constructing engineer has not been chosen as yet, and bids for mining machinery are now under consideration. The officers of the company are: S. Y. Trimble, president, Hopkinsville, Ky.; W. J. Dickinson, vice-president; C. G. McChesney, secretary, and E. J. Ware, treasurer, all of Trenton, Ky.; W. S. Thompson, manager, Madisonville, Ky.

Nicholson Coal Mining Co.

The Nicholson Coal Mining Co., whose plant and offices are located at Middlesboro, Ky., and will produce an output of 500 tons of coal per day, is receiving estimates on electric mining and haulage machinery to cost about \$15,000, and will erect a building of ordinary type, 40x60 feet. J. C. Cardwell is president; A. C. Carr, vice-president and manager; John M. Miller, secretary and treasurer, all of Middlesboro.

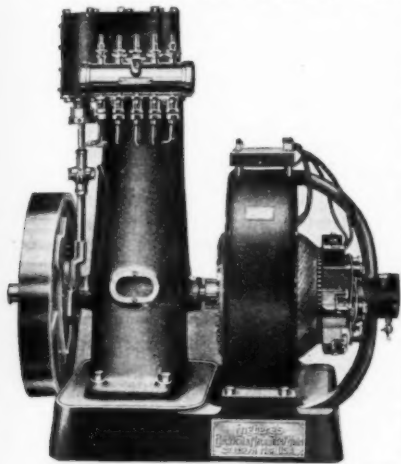
Charles H. Markham, president of the Illinois Central Railroad, was recently elected president of the Central of Georgia to succeed the late Major J. F. Hanson.

MECHANICAL

Engberg's Electrical Machinery.

Among the well-known manufacturers of electrical machinery is Engberg's Electric and Mechanical Works of St. Joseph, Mich., and the company's products include the two direct-connected generating sets and the pilot-house projector illustrated herewith. Describing its projector, the company says:

"Our searchlights are already well known. The general appearance would



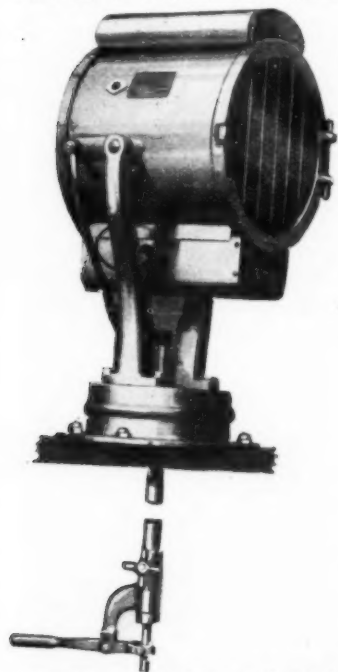
ENGBERG'S DIRECT-CONNECTED GENERATING SET.

be hard to improve upon, and as to reliability and power, there is nothing more convincing than to see them in operation.

"If so desired, we can furnish these lights with diverging lense, to spread the rays.

"The body or shell of the lights are heavy sheet brass, specially annealed to prevent cracking. The front door, back and trimmings are all heavy cast brass, and highly polished, making a very attractive body.

"The forks and base can be furnished



ENGBERG'S PILOT-HOUSE PROJECTOR.

in either polished brass or in black or white enameled iron. The forks are cast hollow for lightness, and which also allows the wires leading to the light to run through them, which protects them from injury. Our quotations are made on lights with brass shell and trimmings, and enameled iron forks and base, unless otherwise specified.

"The light is supported on ball bearings and perfectly balanced on its trunnions, so it can be operated with the least possible friction.

"The pilot-house controlling device and all connections for the same are polished brass. We can also furnish distant controlled lights, operated by wire cables. We use the very best Mangin ground glass silver plated mirrors.

"Our carbon feeding mechanism is very simple, but it maintains an absolutely perfect uniform arc, and produces a steady and powerful beam of light. Sticking of this lamp is impossible, as the carbon holders are pivoted on the lower ends, doing away with slides, carrying the carbon holders, which as soon as they are corroded and covered with carbon dust will cause them to stick. This serious defect is entirely eliminated in our lamp.

"An automatic cut-off is provided to break the current to the feed coil, thereby stopping the feed, should the operator neglect to pull the switch when carbons are consumed to a safe distance from the carbon holders. This also prevents overheating or burning out of this coil.

"No other make of searchlight possesses these most important features. The feed is positive, as the carbons are fed together by a right and left screw.

"The rheostats are made for 110 or 125 volts direct current, unless otherwise specified. They are wound with special resistance wire and on one-piece cast-iron frame, thoroughly insulated with mica and asbestos, making them absolutely fire-proof, and they are covered with a perforated cover to prevent injury to the resistance wire."

Referring to its generating sets, the company says:

"Our generating sets larger than 3½ kilowatts are provided with a water-shed in the engine frame, also oil pump, furnishing the distributing oil trough with oil from the base of the engine.

"Among the many desirable features which give distinction to our generating sets are their accessibility and ease of adjustment of all working parts.

"Removable doors on each side of the frame allow access to the cross-head, wrist-pin and all adjacent parts. For easy access to the lower end of the connecting rod, hand-hole plates are provided on each side.

"The piston is of a single hollow casting, for lightness, and cast in such a way that plugging of core openings are dispensed with, pressed onto piston rod with nut on end. The rings are turned eccentric, and accurately fitted, insuring a perfect steam-tight piston.

"The cross-head is fitted with adjustable phosphorous-bronze shoe. The cross-head pin is steel, hardened and ground, and has taper fit in cross-head, and can readily be removed for inspection.

"The connecting rod is steel, having extremely wide babbit bearings in lower end, and bronze boxes in upper end.

"The crankshaft is made of the very best forged steel, and fitted with counter balances on all sizes larger than 3½ kilowatts.

"The valve is of the balance piston type, and is accurately fitted.

"The governor is of our own design, being very simple and effective; controls the speed within 2 per cent. from no load to full load. There has also been provided means for changing the tension on the governor springs, should it be necessary to change the speed of the engine.

"All sizes larger than 3½ kilowatts are provided with oil pump, pumping the oil from the base of the engine into a sight-feed oil cup, which leads to a distributing oil trough situated on the inside of the engine frame; from here oil pipes lead to all bearings.

"On the 2½ and 3½-kilowatt generating sets all moving parts secure perfect lubrication from a conveniently located

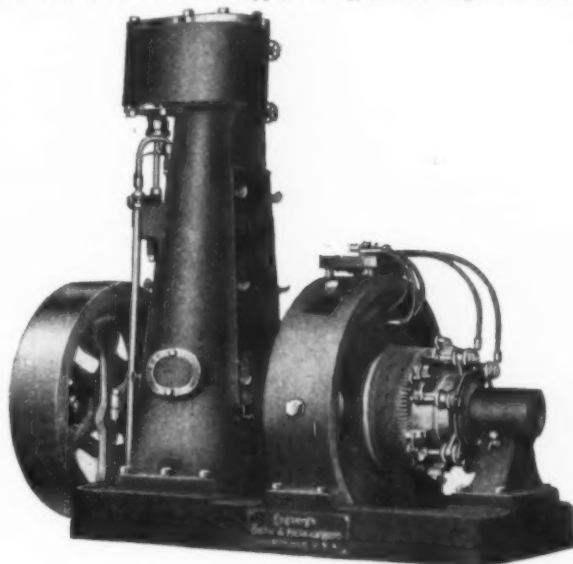
adjustable sight-feed multiple oiler, situated on the outside of the engine frame.

"A large oil reservoir is provided in the base of the engines for collecting the oil, which can be refiltered and used.

"The outboard bearing is a bronze sleeve, self-lining and self-oiling, oil being supplied by an oil reservoir and rings.

"The generators are of the six-pole type, compound wound. The series and shunt coils are separate, and form wound.

"The armature is of the ironclad type,



ENGBERG'S DIRECT-CONNECTED GENERATING SET.

drum wound, and laminated core, built up of electrical sheet steel. The drum and core are provided with air ducts, permitting a thorough circulation of air through the same. The commutator is very heavy, permitting ample wear, built up on a separate sleeve and bolted to the armature drum, so the shaft can be removed without disturbing the windings. The engine crank coupling is coupled direct to the armature drum, dispensing with coupling on armature shaft, very desirable features. Nothing but double cotton-covered magnet wire of the highest conductivity is used, and the insulation is thoroughly waterproof.

"All parts of the engine and generator are of the highest grade as regards material and workmanship, and they have been developed under the most exacting conditions. All bearings are extremely large, assuring smooth and constant operation with comparatively little attention."

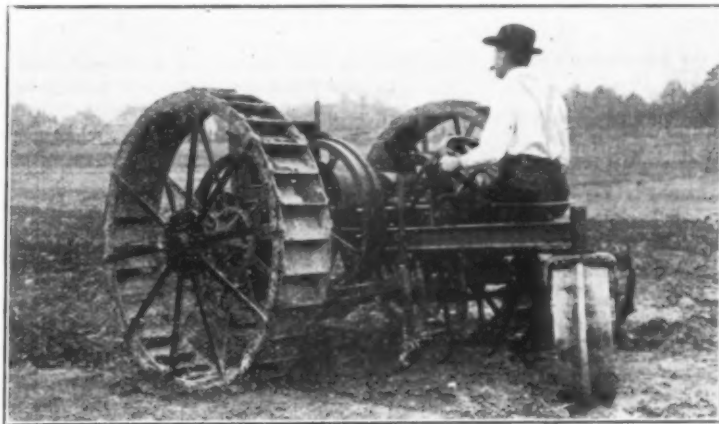
McKinney Traction Cultivator.

An implement which should prove of great value to agricultural interests has

strated to be thoroughly practical. An accompanying photographic illustration of the two-row tractor in operation shows the mechanical structure. The machine is made to stand hard service, but carries no unnecessary weight. It is simple and well balanced in design, and two general models will be offered at first, weighing 3000 and 4500 pounds and developing 18 and 25 horse-power. The light machine will be for planting and general cultivating, and the larger for breaking, plant-

ing, cultivating, hauling and general power purposes. The larger machine measures six feet from center to center of drive s. The drive wheels are 12 inches face and 5 feet in diameter, and are adapted to travel over ground of any character.

One man operates the machine, and no special skill is required, and it is claimed that the work accomplished is equal to that of three two-horse cultivators, and that the machine can be handled with as much ease as a two-horse cultivator. The engine is cranked in the ordinary manner and the machine started by releasing a foot lever, which brings the friction wheels in contact with the driving mechanism. At the end of the row the plows are instantly raised by pulling a lever which connects the lifting mechanism with the engine. The steering wheel is then brought around as far as it will go, the rear wheel turns at right angles to the driving wheel and the machine describes a half circle, coming into the proper position in the next two rows without stopping or backing. It can be run at any speed within reasonable limits that may



McKINNEY TRACTION CULTIVATOR.

been perfected by the McKinney Traction Cultivator Co. of Gainesville, Ga. It has been previously illustrated by the MANUFACTURERS RECORD, and the company now states that the two-row cultivator has proven by careful and extended dem-

be found best suited to the work in hand. Its flexible movement and tractive qualities make it desirable for numerous other uses, and practically any work within the range of gas engines can be done with the McKinney cultivator, so that on the aver-

age farm it would never be necessary for the machine to stand idle. Changes in the implements attached can be made in a short time. The belt power is available for threshing, ginning, sawing, grinding, pumping, etc. If the cultivating work is very light, the machine may be equipped for cultivating several rows at a time, and easily adapted for cotton, corn, cane, etc. The various purposes in which the machine may be employed will be limited only to the ingenuity of the farmer in adapting it to his special requirements.

With the McKinney cultivator it is claimed that a farmer with 100 acres can compete with the large landowner in the matter of cost production, and the farmer will not be burdened with the expense of feeding away a large per cent. of the yield in caring for teams during the idle season.

The primary features enabling the McKinney cultivator to do the work, as claimed by the company, are the lightness of weight, flexibility of movement and the drive-wheel construction. A bad wheel would mean failure to an otherwise successful machine; hence this problem was considered of vital importance and satisfactorily solved.

Pedestal Concrete Pile Foundations.

In construction work where the surface soil is soft, marshy, etc., and where the building to be carried is of considerable weight, it is found necessary to either excavate so as to put masonry footings down

expense of excavation, and would at the same time provide the high carrying capacities which are obtained when masonry foundations are placed directly on the subsoil. In fact, schemes have been used to form a pile of this kind, and although such construction was expensive and the means of getting the pile down by jetting or some screw device, or else an expanding cutter, were complicated and required considerable attendance and labor, considerable increased carrying capacity was attained.

The advantage of a "Pedestal Pile" lies in the fact that the broad base is obtained by a simple process of bulging or mushrooming the concrete out at the lower end of the pile stem. This process can be best explained by referring to the accompanying Figs. 1 to 5. The apparatus necessary consists of a steel core and casing fitting into it. The casing is a steel pipe, 16 inches in diameter and three-eighths inch thick, with outside reinforcing bands. The core is a smaller and longer pipe, with cast-steel point and an enlarged cast-steel head. The core fits inside the casing, its enlarged head engaging the top of the casing and its lower pointed end projecting some four or five feet below the casing. The core is fitted into the casing, and both are driven into the ground to the desired depth, as indicated in Fig. 1.

The core is then pulled out and a charge of concrete is dropped to the bottom of the casing, as in Fig. 2. The rammer is now lowered into the casing and driven down through this concrete, as shown by Fig.

than a pile without the broad base. The carrying capacity of a pile is in general due to two causes, the frictional resistance of the stem with the surrounding earth and the direct bearing of its base on the

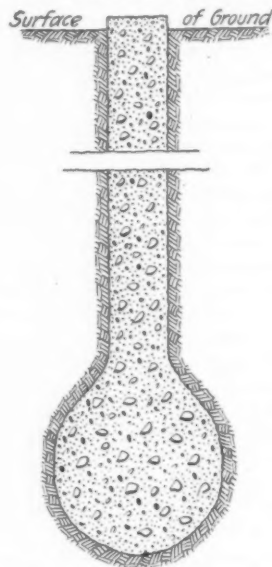


FIG. 4.—PEDESTAL CONCRETE PILE FOUNDATIONS.

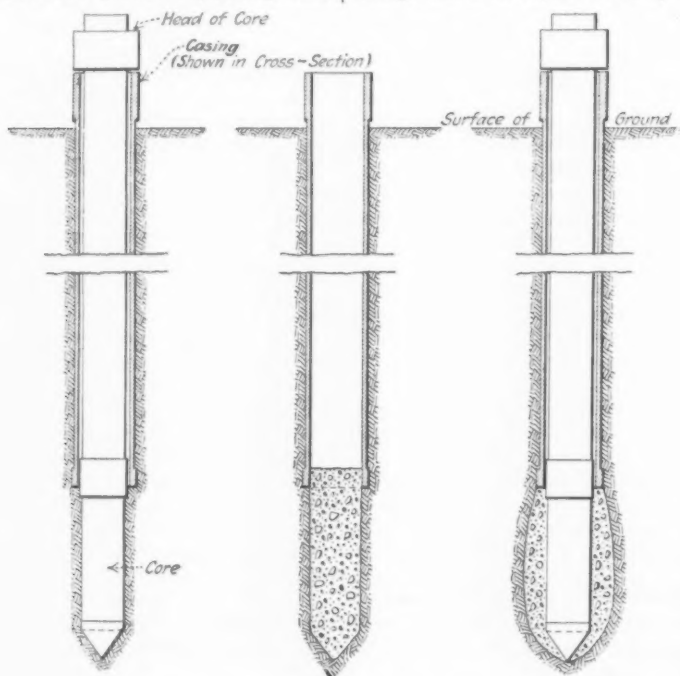
subsoil. Now, the stem of the "Pedestal Pile" is in frictional contact with the earth, just as is any other pile, and it can support a fairly large load by frictional resistance. In addition, it supports a load by the direct bearing of its base upon the

may be safely supported per square foot of bearing area. The foot of the "Pedestal Pile" has an area of about seven square feet. It follows, then, that even under the most adverse conditions the additional loading capacity derived from this foot will be 15 or 20 tons.

As the amount of frictional resistance with the column, while of fairly definite value, is subject to many changes, engineers have found the "Pedestal Pile" an ideal type of pile, in that they can calculate the direct bearing power of the base and know that the pile will carry that load without settlement. As in the majority of sites the subsoil can carry at least four or five tons per square foot, a safe load per pile is thus readily obtained of 30 or 40 tons.

A test was made on a "Pedestal Pile" where 50 tons was carried without any settlement whatsoever. This pile penetrates sand and mud, all of which is wet and soft. Its foot penetrated for a few feet into a soft blue clay. The load of 50 tons remained in position for 24 hours without causing any perceptible settlement. Another interesting test was made where three piles formed in soft muck and mud overlying a sand subsoil supported without any settlement the test of 115 tons placed upon them by the engineers of the Oregon & Washington Railroad. The load was later increased to 135 tons, no settlement being perceptible.

The "Pedestal Pile" is patented in the United States and foreign countries, and fully protected by the McArthur Concrete



FIGS. 1, 2 AND 3.—PEDESTAL CONCRETE PILE FOUNDATIONS.

on the firmer subsoil or to use some form of piling. For centuries wooden piles have been used in sites of this character, and have in many instances, especially where the wood was continuously submerged in water, supported their load without failure. In recent years the scarcity of timber, as well as the increased loading possible with piles made of concrete, has caused a growing use of that type of foundation. Still more recently it has been found that by a very simple adaptation of the method of forming concrete piles in the earth a foundation can be achieved which approximates very closely to a masonry footing on the subsoil, while on the other hand it still retains the many advantages of piling.

Foundation engineers have long recognized that if a pile could have a broad base several times the area of the column it would be an ideal foundation, because it could be placed in the earth without the

3. The concrete is compressed, and is forced out against the soil, pushing back and compacting the surrounding earth. The operation is repeated, and the rammer being withdrawn, another charge of concrete is dropped down inside the shell and the rammer again driven through it, causing the concrete to be forced out still further into the surrounding earth. This process is continued until a sufficient volume of concrete has been rammed down to insure a footing of the desired size. The ram is then removed, the casing is filled to the top with wet concrete and the casing is then removed slowly and evenly, the concrete falling into position and filling out the thin space formerly occupied by the casing. The resulting pile is a column 17 inches in diameter, with the enlarged base or pedestal, as shown in Fig. 4. Fig. 5 is a photograph of a pile formed in this way, dug up for the purpose of inspection.

It is, of course, to be expected that a pile of this kind would carry a greater load

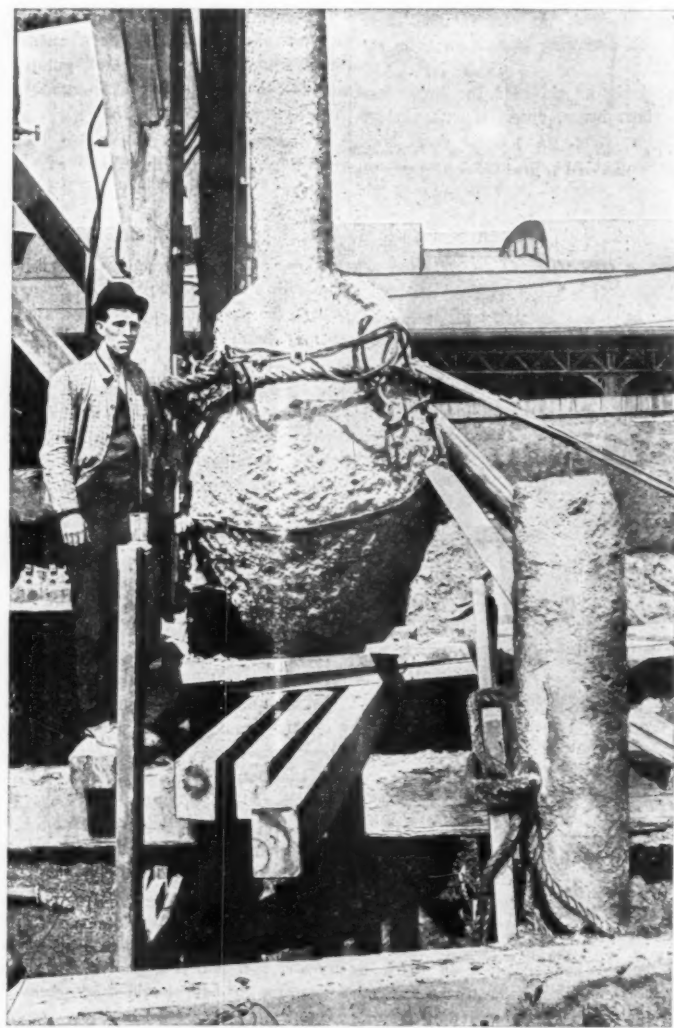


FIG. 5.—PEDESTAL CONCRETE PILE FOUNDATIONS.

subsoil. By a study of the data on the direct bearing power of soil, it will be noted that down 30 or 40 feet below the surface soil a direct bearing power of two or three tons all the way up to 15 tons, where good hard pan is met, and as high as 100 tons where bedrock is encountered,

Pile & Foundation Co., 11 Pine street, New York.

Building permits were issued in Baltimore during January for new construction estimated to cost \$398,000, and for additions amounting to \$19,460.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and when this is necessary the statements are made as rumored or reported, and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular.

"In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned."

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription for the contract period to the Daily Bulletin is included.

BRIDGES, CULVERTS, VIADUCTS

Ala., Demopolis.—Birmingham, Demopolis & Pascagoula Railroad Co., A. R. Smith, president, Demopolis, will construct bridge at Chickasaw Bogue in connection with 17 miles of railroad to be built from Demopolis to Linden, Ala.

Ark., Lake Village.—Chicot County Commissioners awarded contract to Vincennes Bridge Co., Vincennes, Ind., to construct 130-foot steel bridge across Big Yran Bayou; bridge will consist of two 75-foot spans resting on concrete end abutments, with large tubular piers for center.

Fla., Jacksonville.—City will advertise for bids until February 27 for construction of bridge on East Bay St. across Hogans Creek; Phillip Prieoleau, City Engineer. (Recently mentioned.)

Fla., Jacksonville.—Duval county will construct reinforced concrete culvert, 15-foot span, and will complete grading on Mandarin Rd.; bids received until February 24; Gail L. Barnard, County Engineer, Room 9 Courthouse. (See "Machinery Wanted.")

Fla., Pensacola.—Pensacola, Mobile & New Orleans Railway, L. G. Wilkinson, superintendent of construction, has been authorized by Congress to construct proposed bridge over Mobile River.

Fla., West Palm Beach.—Lake Worth Bridge Co., E. N. Dimick, president, Palm Beach, Fla., awarded contract to Southern Bridge Co., Birmingham, Ala., to construct bridge across Lake Worth; 15-foot clearance at high tide; draw, 154 feet long; approaches to it are of porcelain-protected pile construction; cost about \$30,000; J. I. McDonald

of West Palm Beach is supervising architect.

Ky., Louisville.—Jefferson and Hardin County Commissioners have completed arrangements for construction of proposed bridge across Salt River at West Point; structure is to be of steel with cement floor; wagonway and roadway for foot passengers and provision for interurban cars; estimated cost, \$60,000 to \$70,000; Charles F. Taylor, Bridge Commissioner of Jefferson County, Louisville.

Ky., Paducah.—McCracken county will construct 12 steel bridges during present year; structures not to exceed 38 feet in length and will have concrete floors. Address County Commissioners.

La., Houma.—Road committee of Police Jury recommended to Police Jury acceptance of bid of Leverich Bridge Co., Fort Worth, Tex., at \$250 for construction of steel bridge across Bayou Terrebonne; span opening 50 feet; total length 132 feet; width 14 feet; height from 10 feet; J. C. Dupont, president Police Jury. (Recently mentioned.)

La., Shreveport.—Vicksburg, Shreveport & Pacific Railway, D. D. Curran, general manager, New Orleans, La., has conferred with City Commissioners and Bossier Parish Police Jury relative to plans for construction of bridge for railroad traffic exclusively; city and Bossier parish will construct bridge (as previously stated) for vehicles.

Md., Easton.—Talbot and Caroline County Commissioners will construct pivot draw-bridge and 70-foot steel span over Choptank River in connection with road improvements; bids received until February 27. (See "Road and Street Work.")

Miss., Meridian.—Meridian Light & Railway Co., A. B. Patterson, general manager, awarded contract for erection of 4000 concrete steel bridge recently noted.

Mo., Kansas City.—Jackson County Commissioners ordered R. T. Proctor, Highway Engineer, to prepare plans and estimates of cost of concrete bridge across Blue River at 86th St.; 135-foot span.

Okla., Hugo.—Hugo & Northwestern Railroad Co., C. C. Godman, general manager, Hugo, will construct one iron bridge and one piling in connection with 50 miles of railroad to be built from Hugo, probably to Atoka, Okla.

Okla., Hugo.—Choctaw county will probably vote in May on issuance of \$125,000 of bonds for construction of bridges. Address County Commissioners.

S. C., Columbia.—Richland County will vote March 14 on issuance of \$75,000 of bonds for purchase of present bridges or erection of new structures across Congaree and Broad Rivers. Address County Commissioners. (Recently mentioned.)

Tex., Bryan.—Bryan Brazos Valley Railroad Co., John K. Parker, general manager, Bryan, will construct 400-foot bridge across Brazos river in connection with 26 miles of railroad to be built from Bryan to a point near Clay, Tex.

Tex., Menard.—Menard county voted issuance of \$20,000 of bonds for construction of bridge across San Saba River. Address The Mayor. (Recently mentioned.)

Va., Blackwood.—Blackwood Coal & Coke Co. has purchased machinery for development of 2000 acres of coal land previously noted; daily output 1200 tons.

Va., Danville.—City will advertise bids for construction of \$40,000 concrete bridge across Dan River at Union St.; J. O. Magruder, City Engineer, in charge; Wilbur J. Watson, Citizens' Bldg., Cleveland, O., consulting engineer. (Recently noted.)

Va., Fosters Falls.—Virginia Iron, Coal & Coke Co., Bristol, Va.-Tenn., will construct proposed bridge across New River.

Va., Petersburg.—Walnut Hill Corporation awarded contract to Virginia Bridge & Iron Co., Roanoke, Va., at \$30,000 to construct viaduct across valley of Lieutenant Run; structure will be of steel and concrete, about 600 feet long.

Va., Richmond.—Southampton Bridge Corporation, Thomas S. Winston, president, awarded contract to Virginia Bridge & Iron Co., Roanoke, Va., to construct steel bridge across James River, connecting Westhampton with Chesterfield county; structure will be 250 feet long and 20 feet wide, 28 feet above mean low water, 17 feet above bank and 18 inches above high-water mark; cost about \$50,000. (Recently mentioned.)

Va., Spotsylvania.—Board of Public Roads, W. A. Harris, secretary, will open bids about

March 6 for construction of four (recently noted) steel bridges with cement head walls; A. F. Brown, engineer in charge, Fredericksburg, Va. (See "Machinery Wanted.")

W. Va., Kenova.—Chas. S. Churchill, Roanoke, Va., chief engineer, Norfolk & Western Railway, advises as follows concerning recently-noted bridge across Ohio River at Kenova: Masonry is built for double track, and superstructure was so designed; tracks now gauged and operated as double track across bridge; work in view during coming year will provide for full two tracks.

W. Va., New Martinsville.—Wetzel county will construct superstructure of truss bridge, either with or without center pier, across Big Fishing Creek at Reader, W. Va.; length 165 feet; 16-foot roadway with reinforced concrete floor; bids opened February 20; W. J. Alexander, County Road Engineer; S. S. Myers, County Clerk. (See "Machinery Wanted.")

W. Va., Rivesville.—Marion County Commissioners will consider construction of concrete bridge across Pawpaw Creek.

CANNING AND PACKING PLANTS

Ala., Summedale.—W. S. Shure, W. G. Schmidt and others are interested in establishment of cannery.

Miss., Hattiesburg.—Swift & Co., Chicago, Ill., are reported to erect plant; 40x80 feet.

Miss., Natchez.—Natchez Packing Co. increased capital stock from \$100,000 to \$200,000; will increase capacity of plant.

Tex., Mission.—Mission Canning Co. incorporated with \$5000 capital stock by D. A. Kendall, Charles Volz and J. K. Robertson.

Tex., Providence.—Provident Land Co. proposes establishment of fig-preserving plant.

Tex., San Antonio.—G. Denton of Denton Colony Co. purchased 16,000 acres of land on Nueces River; will construct drainage system; establish cannery for meats and vegetables; daily capacity, 20,000 cans.

CLAYWORKING PLANTS

Ala., Leeds.—Shale Bricks.—A. G. Kahn of Selma, Ala., reported as contemplating establishment of shale brick plant.

Ga., Augusta.—Bricks.—Company is being organized with \$75,000 capital stock by J. E. Tarver and associates to establish brick plant; daily capacity 1,000,000 bricks.

Tenn., Graysville.—W. H. Fox of Graysville and J. W. Abel, Chattanooga, Tenn., are promoting establishment of pottery.

Tex., Wichita Falls.—Brick and Tile.—Wichita Falls Brick & Tile Co. increased capital stock from \$75,000 to \$175,000.

COAL MINES AND COKE OVENS

Ky., Heller.—Fon Rogers of Pikeville National Bank, Pikeville, Ky.; J. L. Rogers, Greenville, Ky., and Lon Rogers, Lexington, Ky., purchased property of Elkhorn Consolidated Coal & Coke Co.; 2500 acres; will at once construct ovens, and plan to build 100 during present year; will install electric-power plant to operate 300 ovens; survey now being made and construction to begin by March 15.

Ky., Middlesboro.—Nicholson Coal Mining Co. (recently noted), John C. Caldwell, president, 202 Jefferson St., Louisville, Ky., is negotiating for electric haulage and mining machinery to cost \$15,000; daily capacity, 500 tons of coal.

Ky., Marrowbone.—Marrowbone Coal & Coke Co. contemplates erection of 60 additional ovens; engineer is making estimates; work to begin soon.

Ky., Powderly.—Greenville Coal Co. is name of company to develop 6000 acres of coal property (previously noted at Central City, Ky.); 160-foot shaft has been sunk at new mine and miners' houses are being erected at No. 9 mine; 1500 daily capacity; cost of improvements \$60,000; C. E. Martin, president; W. A. Wickliffe, vice-president and financial manager; C. M. Martin, general manager.

Ky., Trenton.—Kimberly Coal Co. (recently reported incorporated) has elected S. Y. Trimble president, Hopkinsville, Ky.; W. J. Dickinson, vice-president; C. G. McChesney, secretary; E. J. Ware, treasurer; each of Trenton; W. S. Thompson, general manager, Hopkinsville, Ky.; will develop coal mines at Kimberly, Ohio county, about 20 miles from Madisonville, Ky.; 220 acres; capital stock, \$35,000; main offices at Trenton. (See "Machinery Wanted.")

Ky., Sullivan.—Penn Coal Co. has elected George Ruhl president, Frank F. Potry vice-president, John Connor secretary; capital stock \$50,000; will develop 525 acres of coal land; daily capacity, 250 tons of coal; main offices are at Frostburg, Md., instead of Frostburg, Ind., as recently erroneously stated.

Md., Baltimore.—Princess Coal Mining Co. incorporated with \$15,000 capital stock by James C. Pugh, general manager Maryland Tidewater Coal Co., 302 Keyser Bldg.; John B. Timmerman and J. Abner Sayler, Jr.

Md., Lonaconing.—Maryland Coal Co., Wm. H. Ziegler, president, will develop coal properties on more extensive scale than heretofore.

Tenn., Tracy City.—Tennessee Consolidated Coal Co. formed by consolidation of following: Nunley Ridge Coal Co., owned by Pratt Consolidated Coal Co.; Tennessee Consolidated Coal Co., owned by E. L. Hampton and associates, and Pratt Consolidated Coal Co.; Tateville coal lands and Brushey Creek coal lands of E. L. Hampton and associates; acreage within 30,000; capacity of mines now under operation, 1500 tons daily; E. L. Hampton, president, to be addressed; office, Tracy City. (Recently incorrectly noted.)

CONCRETE AND CEMENT PLANTS

Okla., Hartshorne.—Choctaw Portland Cement Co. chartered with \$1,500,000 capital stock to build plant costing \$700,000 and to erect stone crusher; will construct branch railway to site, three miles distant; president, C. B. Blake of Hartshorne; vice-president, B. E. Allison of Kansas City, Mo.; treasurer, E. H. Jayne of Oklahoma City; general offices in Insurance Bldg., Oklahoma City, Okla.

Okla., Tulsa.—J. W. McCloud is understood to be interested in recently-announced plan to build Portland-cement plant.

COTTON COMPRESSES AND GINS

Ala., Talladega.—J. S. B. Thompson of Atlantic, Gulf & Compress Co., Atlanta, Ga., is, it is reported, considering proposition to establish cotton compress.

N. C., Mount Gilead.—Mount Gilead Cotton Oil Co., Frank McAulay, president, will install 40-bale ginnery. (See "Machinery Wanted.")

S. C., Georgetown.—A. S. Elwich is interested in organization of company with \$50,000 capital stock to erect two-press oil mill and dry mixing plant; daily capacity, 30 tons of seed; correspondence with architects and engineers is desired. (Georgetown Grocery Co. recently noted as contemplating erection of mill.)

Tex., Brenham.—Brenham Oil Mill Co. will remodel present plant and operate combined compress, oil mill and electric-light and ice plant. (See "Cottonseed-Oil Mills.")

COTTONSEED-OIL MILLS

N. C., Mount Gilead.—Mount Gilead Cotton Oil Co., Frank McAulay, president, will enlarge plant and install additional oil-mill machinery and 40-bale ginning plant; may also install flour-mill machinery. (See "Machinery Wanted.")

Tex., Brenham.—Brenham Oil Mills Co. will remodel present plant and operate combination oil mill, electric-light and ice plant and cotton compress; has placed order for machinery.

Tex., Giddings.—Lee County Cotton Oil Co. incorporated with \$40,000 capital stock by F. S. Grogan, C. D. Cass and L. C. Smith.

Tex., Mineola.—Mineola Improvement Club is interested in establishment of cottonseed-oil mill.

DRAINAGE AND IRRIGATION

La., Barataria.—Arcadian Land Co., E. W. Lyford, general manager, Waverly, N. Y., purchased 1900 acres of land in Barataria section and will reclaim at cost of about \$50,000; develop for farming; company will have local office with Louisiana Meadows Co., New Orleans, La., from whom property was purchased.

La., Lockport.—Louisiana Golden Meadows Land Co. of Michigan organized with \$1,500,000 capital stock by F. S. Porter, Lansing, Mich., and others; will acquire properties of Golden Meadows Development Co., comprising 24,766 acres of marsh land in Lafourche parish, 1800 acres of which were reclaimed during operations of latter company; trans-

action involves about \$122,000; purchasers will purchase new machinery and resume canalization and drainage of land; canals and laterals will be used for both transportation and drainage purposes; after land is reclaimed it will be sold in small tracts and colonized by farmers.

Tex., Houston.—Melado Land Co., S. H. Jackson, president, has engaged Randall-Lovegrove-Wyman, Houston, as consulting engineers to prepare plans for and install irrigation system in connection with development of 24,000 acres of land. (See "Land Developments.")

Tex., San Antonio.—G. Denton of Denton Colony Co. purchased 16,000 acres fronting for 10 miles on Nueces River; irrigation canals will be constructed.

Tex., Webster.—Webster Irrigation Co. incorporated with \$25,000 capital stock by M. E. Meador, R. W. Farrar and J. S. Kendall.

ELECTRIC LIGHT AND POWER

Ala., Eufaula.—City has engaged engineer of Birmingham, Ala., to estimate cost of constructing electric-light plant. Address The Mayor.

Ark., Ashdown.—City will soon be prepared to let contract for construction of electric-light plant recently noted; F. A. Locke, Mayor.

Ark., Russellville.—Russellville Water & Light Co., F. E. Leonard, manager, contemplates building auxiliary steam-power plant; expects to construct electrical transmission line to Atkins, Ark., during next six months.

Ark., Snyder.—City voted issuance of \$40,000 of bonds for extension of electric-light and water systems. Address The Mayor.

Ark., Wynne.—City will rebuild electric-light plant, changing system from direct to alternating current; \$50,000 of bonds will be issued; W. H. Allnut is superintendent.

D. C., Washington.—Capital Traction Co. will erect 2-story brick power station at 3140 K St. N. W.; estimated cost \$200,000; plans by Capital Traction Co. and Marsh & Peter, 530 13th St. N. W., Washington; contractor, James L. Parsons, 616 Union Trust Bldg., Washington.

Ky., Columbia.—Columbia Lighting Co., A. H. Ballard, secretary, contemplates installing 90-kilowatt direct-current generator; proposes changing system from alternating current to direct current.

Ky., Dayton.—City Council accepted bid of Union Light, Heat & Power Co., Covington, Ky., for 20-year franchise for furnishing electric light.

Ky., Grayson.—Home Light Co., J. A. Bagby, manager, contemplates installing larger plant; proposes to install generating equipment of sufficient capacity to provide for 1000 lamps of 16 candle-power and 80-horse-power boiler.

Ky., Hickman.—Hickman Ice & Coal Co., J. T. Dillon, manager, contemplates installing direct-connected unit, either 100 or 150-kilowatt alternating-current 3-phase 60-cycle generator.

Miss., McComb.—City will construct electric-light plant. Address The Mayor.

Miss., Newton.—Mayor and Board of Aldermen passed ordinance providing for issuance of \$11,000 of bonds for construction of electric-light plant. Address The Mayor.

Mo., Irondale.—James P. Ward is interested. It is reported, in construction of water-power-electrical plant.

Mo., Kirksville.—City will vote on issuance of \$65,000 of bonds for construction of electric plant to light streets and pump water from Chariton River, six miles distant. Address The Mayor.

Okla., Hollis.—Chickasha Cotton Oil Co., R. G. Latting, general superintendent, contemplates erection of electric-light and ice plant in connection with oil mill; will install equipment. (See "Machinery Wanted.")

Okla., Sugden.—Water and Light Department, Ryan, Okla., contemplates submitting proposition to Sugden and Terrell, Tex., to extend transmission lines to these towns and furnish electric lighting. J. M. Thomas is superintendent of Ryan electric-light plant.

Okla., Sentinel.—City will vote in March on issuance of \$12,000 of bonds for construction of electric-light system. Address The Mayor.

Okla., Terrell.—See Okla., Sugden.

S. C., Charleston.—Rudolph Hering of Hering & Fuller, 170 Broadway, N. Y., advises that he is not engaged to make estimates, etc., for electric-light plant, as recently incorrectly noted. Mr. Hering's work is solely in connection with the water-works construction.

S. C., St. George.—City will probably vote

on issuance of \$17,000 of bonds for construction of electric-light plant and water-works. Address The Mayor.

Tenn., Apalachia.—Carolina-Tennessee Power Co. advises it is acquiring properties and proceeding with engineering for proposed water-power-electrical plant previously detailed; probably not begin construction for some time; previous reports were that company contemplates two dams to develop 90,000 horse-power for transmission by electricity; total expenditure was estimated at \$8,000,000; executive offices at 115 Broadway, New York.

Tex., Brenham.—Brenham Oil Mill Co. will remodel present plant and operate electric-light and ice plant, etc. (See "Cottonseed-Oil Mills.")

Tex., Brownsville.—City will vote March 14 on issuance of \$15,000 of bonds to extend electric-light system. Address The Mayor.

Tex., Sunset.—Sunset Heights Water, Light & Power Co. incorporated with \$20,000 capital stock by Richard Rodgers, B. R. Hardin and W. E. Courtney.

Tex., Kirbyville.—Fleming-Morton Company, J. W. Fleming, president, will construct electric-light plant recently noted; 50 kilowatts capacity. (See "Lumber-Manufacturing Plants.")

Tex., Providence, R. F. D. from Grand Saline.—Provident Land Co. is interested. It is reported, in construction of electric-light plant.

Va., Chase City.—City awarded contract to John L. Livers, Grottoes, Va., for construction of electric-light plant previously reported; machinery purchased; cost \$20,000; J. Kent White, engineer, Chase City, Va.

Va., Waverly.—City voted issuance of \$7000 of bonds for construction of electric-light plant and street improvements. Address The Mayor.

W. Va., Bungers.—Slater S. Tuckwiler contemplates installing electric-light plant; proposes to develop water-power.

FERTILIZER FACTORIES

Ala., Arlton.—Arlton Fertilizer Co. (recently reported incorporated with \$10,000 capital stock) will erect \$2500 building; ordinary construction; cost of machinery, \$1000; W. C. Windham, president and secretary-treasurer; Fox Henderson, vice-president.

Ga., Toccoa.—Dance Guano Co. incorporated with \$10,000 capital stock by C. H. Dance, Rush Herndon and Zack Martin.

Ga., Senola.—C. C. McKnight & Bro. will establish guano-mixing plant; machinery purchased.

N. C., Wilmington.—Pearsall & Co. has plans by and awarded contract to C. B. West, Greenville, N. C., for erection of recently noted addition to plant; 100x112 feet; mill construction; daily capacity plant, 100 tons.

S. C., Georgetown.—A. S. Elwich is interested in organization of company to erect dry mixing plant and two-press oil mill. (See "Cottonseed-oil Mills.")

FLOUR, FEED AND MEAL MILLS

N. C., Mount Gilead.—Mount Gilead Cotton Oil Co., Frank McAulay, president, contemplates installing feed mills grain machinery. (See "Machinery Wanted.")

Okla., Hobart.—Hobart Mill & Elevator Co. reported to install feed-grinding machinery. (See "Miscellaneous Enterprises.")

Tenn., Loudon.—Newport Mill Co. will establish corn and feed mill to replace flour mill.

Va., Williamsburg.—Pitman & Son will install flour-mill equipment.

FOUNDRY AND MACHINE PLANTS

Ala., Gadsden.—Flows.—Mr. Hicks of Florida is conferring with Business Men's Club relative to establishment of plant for manufacturing plows.

Ala., Tuscaloosa.—Foundry and Tram Cars, C. H. Ruggles, president of South Houston Iron Works, South Houston, Tex., has completed arrangements for his previously noted plant at Tuscaloosa; about March 1 will commence erection of foundry and machine shop for general machine work and manufacture of tram logging cars; will erect frame building with ironclad asbestos roof; machine shop 30x50 feet; foundry 40x50 feet; no bids; cost of equipment about \$5000. (See "Machinery Wanted.")

Fla., Tampa.—Machinery.—Ulmer Machinery Co. incorporated with \$15,000 capital stock; M. W. Ulmer, president; D. C. McMullen, vice-president; C. R. Morrison, secretary-treasurer.

Ga., Atlanta.—Georgia School of Technol-

ogy will open bids February 18 for erection of previously-noted building; to contain machine shop, etc. (See "Schools.")

Mo., Springfield.—Stoves.—Woods-Evertz Stove Co., W. W. Woods, president, increased capital stock from \$130,000 to \$200,000.

Mo., St. Joseph.—Jamison Machine Co. (recently reported incorporated with \$10,000 capital stock) will continue established (firm) business.

Okla., Oklahoma City.—Steel Foundry.—Central Foundry Co., Baum Bldg., will establish steel foundry; main building will be brick, one story, 50x150 feet; in addition to main structure will erect fireproof building, 35x40 feet, in which to store patterns; will also manufacture gray iron products.

Tenn., Chattanooga.—Armatures.—Chattanooga Armature Works is having plans prepared for erection of 47½x135-foot factory building; two stories; brick; composition roof; cost \$5000.

Tenn., Knoxville.—Stoves.—Sanford-Day Iron Works awarded contract to L. A. Galyon of Knoxville to erect three buildings—factory building, assembly-room and warehouse; cost \$30,000; will be equipped for manufacturing stoves. (Lately mentioned.)

Tenn., Memphis.—Gas Engines.—Odee Gas Engine Co., Beloit, Wis., will, it is reported, establish plant; understood that company will be reorganized and capital stock of \$100,000 increased.

Tex., Houston.—Brass Foundry.—Kettler Brass Manufacturing Co. increased capital stock from \$30,000 to \$60,000.

Tex., San Antonio.—Ice Machinery.—Modern Ice Machine Co. incorporated with \$30,000 capital stock by W. G. Roloff, H. Zork and Charles M. Dickson.

Va., Lynchburg.—Ryalls Machine Co. incorporated with \$100,000 capital stock; R. M. Scanlan, president, Peoria, Ill.; C. L. T. Fisher, secretary-treasurer, Lynchburg.

W. Va., Parkersburg.—Shovels, etc.—Baldwin Tool Works, Frank M. Baldwin, president, will not at present erect addition to plant recently noted; plans may be considered in a year or two.

GAS AND OIL DEVELOPMENTS

Ga., Savannah.—Phosphorized Oil Co. incorporated with \$5000 capital stock; Edward S. Elliott, attorney.

La., Baton Rouge.—Avery Oil Co. organized with S. Farrnbacher president, Ernest Boehringer vice-president, Alex. Grouchy secretary-treasurer; will develop 60 acres of land in Vinton field.

La., Covington.—St. Tammany Drilling Co. incorporated by P. J. Lacroix, E. G. Del'Corral, B. B. Warren and others.

La., Shreveport.—Caddo Gas & Oil Co., Caddo, La., is reported to construct eight-inch pipe line from Caddo field to Shreveport.

Tex., Markham.—Burke Oil Co. incorporated with \$16,000 capital stock by Geo. R. Burke, A. M. Anderson, Sig Brown and others.

W. Va., Clarksburg.—Mascot Oil & Gas Co. incorporated with \$32,000 capital stock by H. A. Heinze, Ransel Johnson, T. L. Nutter and others.

ICE AND COLD-STORAGE PLANTS

Ark., De Witt.—W. H. Echols and Edward Rankin of Faxon, Okla., will establish 10-ton ice plant and creamery.

Fla., Palatka.—Putnam Ice & Storage Co. incorporated with \$10,000 capital stock; John W. Glisson, president; Henry F. Atkinson, vice-president; Randall Wells, secretary-treasurer; will erect building; reinforced concrete and iron; machinery, including 20-ton ice machine, purchased.

Fla., Perry.—Perry Electric Co., J. H. Scales, secretary-treasurer, contemplates installation of 15-ton refrigerating plant.

Ga., Thomaston.—Thomaston Ice Co. is name of company recently noted to be organized by F. M. Garner, A. J. Nelson and C. W. Reid to establish ice plant; machinery mainly purchased; daily capacity, 12 tons. (See "Machinery Wanted.")

La., New Orleans.—Home Ice & Manufacturing Co. incorporated with \$24,000 capital stock; Erwin Hamner, president; Clifton T. Hatching, vice-president; Sol J. Drapekin, secretary-treasurer.

Okla., Hollis.—Chickasha Cotton Oil Co., R. G. Latting, general superintendent, contemplates erection of ice and electric-light plant in connection with oil mill; will install machinery. (See "Machinery Wanted.")

Okla., Ryan.—J. M. Thomas and associates are planning to construct 15-ton ice plant to be operated in conjunction with municipal electric light; propose to purchase steam-power from municipal plant.

Tenn., Coal Creek.—Coal Creek Electric Light Co. will establish ice plant. (See "Miscellaneous Enterprises.")

Tex., Brenham.—Brenham Oil Mill Co. will remodel present plant as ice and electric-light plant, etc. (See "Cottonseed-oil Mills.")

Tex., Kirbyville.—Fleming-Morton Company, J. W. Fleming, president, will not at present construct ice plant recently noted.

Tex., San Antonio.—Mission Ice Co. incorporated with \$30,000 capital stock by H. H. Baldwin, J. A. Johnston, I. L. Carney and others.

Va., Graham.—Mitchell Ice Co. is considering improvements to plant to double capacity.

W. Va., Ravenswood.—Creamery Co., John J. Fall, director, will install ice and cold-storage plant; daily capacity six tons of ice; refrigeration, about 3000 pounds of butter. (See "Machinery Wanted.")

IRON AND STEEL PLANTS

W. Va., Morgantown.—Steel Plant.—Vanadium Steel Co. incorporated with \$50,000 capital stock by Albert Loeb, John M. Gregg, William H. Brand and others.

LAND DEVELOPMENTS

Ala., Birmingham.—Leonard Realty & Investment Co. incorporated with \$5000 capital stock; C. E. Leonard, president and treasurer; W. V. Trammell, secretary.

Ala., Birmingham.—Mutual Realty & Investment Co. incorporated with \$25,000 capital stock; J. D. Scruggs, president; E. E. May, vice-president; J. R. May, Jr., secretary-treasurer.

Ala., Ensley.—Prudential Realty Co. organized with \$100,000 capital stock; A. F. Hilleke, president; W. F. Nagel, vice-president; C. T. Park, secretary; H. M. Cowart, treasurer; will develop tract of land on Park Ave.; erect dwellings, 20-room apartment-house, etc.

Ala., Mobile.—Pace Orchard Co. incorporated with \$4000 capital stock; W. L. Henderson, president; J. W. Hunter, secretary-treasurer.

D. C., Washington.—B. N. Duke of Durham, N. C.; John W. Craddock, Frank P. Harmon and R. O. Horton of Lynchburg, Va., purchased Alexander Shepherd property, consisting of 217 acres, for about \$1,000,000; will, it is reported, subdivide into building sites; construct streets and sidewalks, and boulevard from Georgia Ave. to 16th St.; install sewer and water mains, etc.; development under supervision of Robert E. Heater of 412-13 Colorado Bldg., Washington.

Fla., Pensacola.—West Pensacola Land Co. purchased 570 acres of land for about \$190,000 and will make improvements in connection with Peterson tract (under development); plans call for hardening Garden St., constructing driveway to bayou, clearing land of timber, subdividing into building sites, constructing sidewalks, etc.

Fla., Santa Rosa County.—C. A. Russell of Cleveland, O., purchased 10,000 acres of land for \$150,000 and will develop for winter resort; erect hotel, etc.

Ga., Sylvester.—Southern Development Co. organized with \$25,000 capital stock to deal in real estate, making specialty of subdividing farm land tracts; contemplates building houses, clearing up farms, etc.; G. F. Alford, president; J. H. Hillhouse, vice-president; M. H. Westbury, secretary-treasurer.

Ky., Nortonville.—Nortonville Coal & Coke Co. will develop residence park; erect 50 dwellings, hotel etc.; development under supervision of Moore & Hogg.

La., New Orleans.—Farms.—J. A. Penick of Chariton, Iowa, plans organization of company to develop land for farming; contemplates purchase of two extensive tracts and division into farms.

Maryland.—F. Mertens' Sons, Cumberland, Md., are promoting development of land in Potomac Valley of Western Maryland; fruit-raising or residences.

Md., Roland Park.—Baltimore Suburban Sewerage Co. incorporated with \$1,200,000 capital stock; president, Albert H. Wehr of Baltimore County Water & Electric Co., 100-102 W. Fayette St., Baltimore, Md.; treasurer, Henry G. Skinner of Skinner Shipbuilding & Dry-Dock Co., Locust Point, Md.; will construct boulevard from Roland Park to Green Spring Valley, beginning at west end of Cedar Ave. bridge and extending to Pikesville, making available 4500 acres for development; boulevard to be four miles long, oiled and macadamized, supplemented for nearly three miles by driveway with sidewalks on each side; uniform width of 30 feet between curbs with 20 feet for driveway; company purchased abutting property on both sides of boulevard and will subdivide into lots 200x250

feet; will install sewerage system (including 30 miles of trunk line), establishing disposal plant in valley of Jones Falls; boulevard and sewerage system will run through Chestnut Hill, Hilltop Park, Mt. Washington Heights, Cheswood and Bancroft Park; entire system relieved by gravity system.

Mo., St. Louis.—American Agricultural Co. incorporated with \$125,000 capital stock by N. A. Aubuchon, Geo. Townsend and others.

N. C., Fayetteville.—Fayetteville Improvement Co. incorporated with \$25,000 capital stock by J. H. Judd, J. M. Lilly and Wm. S. Jordan.

S. C., Anderson.—College Heights Land Co. incorporated with \$6000 capital stock by R. S. Ligon, J. D. Brown, Lee G. Holleman and others.

Tenn., Clarksville.—Cumberland Valley Land Co. incorporated with \$60,000 capital stock by H. N. Leech, Caney B. Lyle, Q. C. Atkinson and others.

Tenn., Kenton.—Kenton Land Co. incorporated with \$10,000 capital stock by T. McKing, Sol Shatz, Henry Flowers and others.

Tenn., Knoxville.—Knoxville Nursery Co. purchased 275 acres of land for \$8000 and will develop for peach and apple orchards.

Tex., Houston.—Melado Land Co., S. H. Jackson, president (previously reported incorporated with \$300,000 capital stock), is proceeding with development of 24,000 acres of land in Melado and Monte Christo survey; demonstration farms in nuts, fruits, etc.; Randall-Lovegrove-Wyman, First National Bank Bldg., Houston, have been engaged as engineers in charge of construction and installation of irrigation system; plans include 2,500,000-gallon reservoir (already constructed), several artesian wells, number being increased as irrigation plans proceed; will also establish central pumping plant, etc.

Tex., San Antonio.—Charles E. Greening of Monroe, Mich., will establish park in San Jose; cost \$100,000.

Tex., Weldon.—East Texas Development Co. will develop townships; W. A. Moore, president; J. W. Canon, vice-president; C. B. Granbury, secretary-treasurer; further plans not definite; main office, Houston, Tex. (Recently noted incorporated with \$5000 capital stock.)

Va., Richmond.—White Sulphur Springs Co. increased capital stock from \$50,000 to \$1,000,000; will make extensive improvements to property.

W. Va., Huntington.—Mutual Land Co. incorporated with \$50,000 capital stock by C. A. Staats, F. L. Whitaker, T. McK. Hays and others.

W. Va., Terra Alta.—Dry Ridge Orchard Co. incorporated with \$50,000 capital stock by F. E. Parrack, F. Gay Parrack, M. O. Parrack and others.

LUMBER MANUFACTURING

Ala., Anniston.—Houser Lumber Co. incorporated with \$12,000 capital stock by C. J. Houser, Shaler Houser, J. R. Houser and others.

Ala., Birmingham.—I. E. Hood Lumber Co. will erect planing mill at Central Park; site comprises two and a half acres; property fronts 306 feet along Atlanta, Birmingham & Atlantic Railroad, and arrangements have been made for construction of spur track; will also erect two-story office building; estimated expenditure \$100,000.

Ala., Birmingham.—Martin Planing Mill Co., S. Martin, president, Des Moines, Ia., is considering establishment of planing mill; 120x300 feet; two stories; cost to be about \$150,000; Mr. Martin is registered at Morris Hotel, Birmingham.

Ark., Fayetteville.—J. H. Phipps Lumber Co. increased capital stock from \$100,000 to \$250,000.

Ga., Tifton.—Tifton Planing Mill Co. incorporated with \$5500 capital stock and privilege of increasing to \$50,000 by R. C. Postell, W. M. Wall and R. S. Kell; purchased plant of Golden-Hargrett Lumber Co.

Miss., Meridian.—Meridian Planing Mill Co. incorporated with \$25,000 capital stock by H. R. Stone, George B. Neville and C. E. Myers; will erect 24x32-foot two-story office building and 60x120-foot mill; day's labor; install large timber sizer and fast-feed matcher, with necessary equipment; officers not elected.

Miss., Natchez.—Homochitto Development Co. incorporated with \$60,000 capital stock by Sim H. Lowenburg, E. Samuels and M. Gaither.

N. C., Greensboro.—Yellopine Lumber Co. (recently noted incorporated with \$25,000 capital stock) has purchased timber rights on about 2000 acres of land in Onslow coun-

ty; will install saw-mill, dry kilns and planing mill with daily capacity of 15,000 feet finished lumber; building and machinery arrangements completed; N. R. Wood, president; T. W. Alderman, vice-president; M. M. Alderman, secretary; E. R. Wharton, treasurer; main office, Greensboro.

N. C., Goldsboro.—Nathan O'Berry, president Empire Lumber Co., Mount Olive, N. C., purchased properties of Cape Fear Lumber Co. for \$125,000, including standing timber located in Eastern Carolina; timber will be used principally by sawmill at Whiteville, N. C.

S. C., Edgefield.—E. S. Johnson will rebuild planing mill recently reported burned; building 45x45 feet; ordinary construction; erection by owner; machinery mainly purchased; cost of building and equipment \$2500. (See "Machinery Wanted.")

Tex., Dallas.—Buell Planing Mill Co. will rebuild planing mill recently burned; planing-mill building will be one story, 110x116 feet; office building will be frame, 30x60 feet; cost \$6500.

Tex., Kirbyville.—Fleming-Morton Co. will establish planing mill recently noted; erect sheet-iron wood-frame building; cost \$1500; machinery purchased; daily output 50,000 feet of lumber; also construct electric-light plant of 50 K. W. capacity; J. W. Fleming, president and manager; R. J. Morton, secretary-treasurer.

Tex., Mineola.—Improvement Club, L. D. Callaway, president, is promoting establishment of hardwood sawmill.

W. Va., Leet.—B. Johnson & Son, 331 Main St., Richmond, Ind., will handle recent timber purchase (2000 acres) in connection with present operation at Leet; no additional machinery needed. (Lately noted.)

METAL-WORKING PLANTS

Tex., Houston.—Metallic Hose.—Dickson Flexible Metallic Hose Co., recently noted (under "Miscellaneous Factories") incorporated with \$200,000 capital stock, will manufacture patented flexible metallic hose for air, steam and signal purposes, and oil-burning locomotives; hose specially adapted for connections between locomotives and freight and passenger cars; will place contracts for manufacture; R. C. Duff, president; Henry Dickson, vice-president; Geo. N. Dickson, secretary and treasurer; Chas. K. Rein, general manager.

W. Va., Wheeling.—Cans.—Johnson-Morse Can Co. incorporated with \$1,000,000 capital stock by George A. Laughlin, Alexander Glass, Albert C. Whitaker, Oliver J. Johnson and Joseph P. Wells, all of Wheeling, and A. A. Morse of LaCrosse, Wis.; will acquire plant of Wheeling Can Co., erect addition and double capacity.

MINING

Ala., Birmingham.—DeKalb Land & Mining Co. incorporated with \$12,500 capital stock; Geo. A. Gibson, president and treasurer; Will McFarlane, general manager; E. Greenhaigh, secretary.

Ala., Mobile.—Peninsula Mining Co. incorporated with \$10,000 capital stock.

Ala., Ganits Quarry.—Alabama Marble Co., John Stephen Sewell, general manager, will rebuild marble plant previously reported burned; to include two sheds; 400x68 feet and 375x50 feet; one story; ordinary construction; cost \$15,000; contract for material and erection of buildings will be let locally; present damaged machinery will be rebuilt and central-station equipment of 500 K. W. capacity installed.

Ark., Russellville.—Iron.—W. H. Beatty and associates of Birmingham, Ala., purchased 10 acres of iron-ore land; will construct washer and develop.

Mo., Joplin.—Lead and Zinc.—Connecticut Concentrating Co. incorporated with \$100,000 capital stock by Clark Marshall, N. A. Mackey, Sardius Smith, Jr., and others.

Mo., Savannah.—Stone.—Savannah Stone Co. incorporated with \$10,000 capital stock by O. F. Spiers, H. J. Wischart and J. H. Vanbrunt.

Tenn., Columbia.—Phosphate.—Consolidated Phosphate Co. incorporated with \$700,000 capital stock by John W. Fry, Geo. W. Killebrew, E. Dan Smith and others.

Va., Sylvanus.—Iron.—N. J. Worrell will develop iron-ore deposits on Little Reed Island. (Recently erroneously reported as Sylvanus, Ark.)

Va., Falls Church.—Waller Mining Corporation (recently reported incorporated with \$500,000 capital stock) will operate Waller gold mines in Goochland county, consisting of 214 acres of land; will expend \$5000 in developing and installation of new machinery;

erection of mill will be considered later; James C. Williams, Tabscott, Va., engineer in charge.

MISCELLANEOUS CONSTRUCTION

Ala., Birmingham.—Monument.—Italians contemplate erecting monument to Christopher Columbus costing about \$40,000; S. R. Guarino, editor of *Il Libero Pensiero*, can be addressed.

Fla., Bayboro.—P. O., St. Petersburg.—Dredging.—Bayboro Investment Co., H. A. Kellam, secretary, St. Petersburg, will dredge 100,000 cubic yards of material at Bayboro; bids received until March 1. (See "Machinery Wanted.")

Fla., West Palm Beach.—Docks and Sea-Wall.—City will vote March 21 on issuance of \$55,000 of bonds for improvement of docks and construction of sea-wall along Lake Worth. J. B. McGinley, Mayor. (See "Road and Street Work.")

Ga., Augusta.—Fishway.—City awarded contract to W. F. Bowe of Augusta at \$4800 to construct reinforced concrete fishway over dam at locks; Nisbet Wingfield, City Engineer. (Recently mentioned.)

La., New Orleans.—Wharf.—Board of Commissioners, Port of New Orleans, Suite 300, New Orleans Court Bldg., will receive bids until February 21 for construction of wharf in front of Immigration Station, right bank Mississippi river; structure will be 300 feet long, 40 feet deep with piles at each end and connected by superstructure 75 feet, making a total of 450 feet of working wharf; to be covered with corrugated steel 28x25 feet. Hugh McCloskey, president of Board. (Recently mentioned. See "Machinery Wanted.")

Miss., Gulfport.—Harbor Improvements.—Gulf & Ship Island Railroad, W. H. Gardner, Jr., chief engineer, will provide additional harbor and docking facilities. (See "Railway Shops, Terminals, Roundhouses, Sheds, etc.")

Tenn., Memphis.—Subways.—City will petition Legislature for authority to issue \$250,000 of bonds for proposed construction of 11 subways; E. H. Crump, Mayor. (See "Road and Street Work.")

Tex., Dallas.—Lock and Dam.—United States engineers have completed plans for lock and dam to be constructed at Hurricane Shoals in Trinity River; will have lift of about 30 feet; cost estimated at \$200,000; plans will be forwarded to Washington for submission to chief engineer; R. B. Gillette, Jr., United States engineer, will take soundings and make surveys preparatory to preparation of plans and specifications for lock and dam at White Rock Shoals; Jacob M. Dickinson, Secretary of War, Washington, D. C.

Tex., Fort Worth.—Tunnel.—City Commission ordered construction of tunnel under railroad tracks on E. 4th St.; J. D. Trammell, City Engineer.

Va., Colonial Beach.—Pier.—Colonial Beach Co., Paul Dulaney, president, foot of 7th St., Washington, D. C., has not yet made plans for recently noted \$30,000 pier; work depends upon dredging of channel.

MISCELLANEOUS ENTERPRISES

Ala., Anniston.—Hardware.—Cater-Kilby Hardware Co., incorporated with \$25,000 capital stock, has taken over City Hardware Co.'s business; George E. Cater, president; W. S. Kilby, secretary-treasurer.

Ala., Birmingham.—Auto Repairing.—Anderson-Gladden Repairing Co. incorporated with \$2000 capital stock; J. C. Anderson, president; J. D. Gladden, treasurer; O. G. Gladden, secretary.

Ala., Birmingham.—Construction.—Realty Construction Co. incorporated with \$2000 capital stock; Gus A. Pope, Jr., president; Frederick Larkin, vice-president; A. B. Tanner, secretary-treasurer.

Ala., Demopolis.—Printery.—Demopolis Printing Co. (recently reported incorporated with \$5000 capital stock) purchased job and newspaper plant; E. S. Cornish, president; M. G. Cornish, vice-president; C. A. Verbeck, secretary-treasurer.

Ark., Little Rock.—Sand and Construction.—Southern Sand & Construction Co. reorganized with G. G. Wood president and general manager; Walter Henry, secretary; W. T. Abington, assistant secretary; J. H. Hughes, treasurer.

Fla., Port St. Joe.—Publishing.—Port St. Joe Co., J. C. Van Riper, president, contemplates establishing plant and installing machinery to publish newspaper. (See "Machinery Wanted.")

Fla., Tampa.—Garage.—A. R. Swann awarded contract to Aulick & Miller, Tampa, for erection of garage; two stories; 68x105 feet; brick, gravel roof; cost \$8800; plans by Jay & Larmer, Tampa. (Recently noted.)

Fla., Tampa.—Hardware.—Thomas & Bentley Hardware Co. incorporated with \$25,000 capital stock; D. L. Thomas, president and general manager; C. A. Sperry, vice-president; Lee Bentley, secretary-treasurer.

Ky., Louisville.—Coffee.—Outerbacker Coffee Co. increased capital stock from \$80,000 to \$100,000.

Ky., Louisville.—Plumbing Supplies.—B. Schatzky & Wetzel Company incorporated by William Schatzky, George Wetzel and others.

La., Kenner.—Ferry Line.—J. Fortier is president of company being organized to establish ferry line between Kenner and South Kenner.

La., New Orleans.—Stockyards, etc.—Crescent City Stockyard & Slaughter-house Co. is considering making number of improvements.

La., Shreveport.—Construction.—Magnolia Construction Co., C. W. Hardy, president (recently reported incorporated with \$50,000 capital stock), will engage in paving, sewer, cement and concrete work.

Md., Baltimore.—Garage.—Madison Motor Car Co. incorporated with \$15,000 capital stock by Talbot D. Smith, 311 W. Lanvale St.; Robert O. C. Williams, 1307 St. Paul St., and John E. Norwood, 816 W. North Ave.

Md., Baltimore.—Undertaking Establishment.—John J. Fields, 1290 W. Lombard St., awarded contract to R. B. Mason, 210 E. Lexington St., Baltimore, for three-story brick addition; 16x26 feet; cost \$3000; plans by Stanislaus Russell, Clifton Ave. and 7th St., Baltimore. (Previously mentioned.)

Md., Baltimore.—Printery.—Wood Publishing Co., incorporated with \$3000 capital stock by John Early Wood, Jr., of New York; Howard M. Emmons, 943 Calvert Bldg., and Holly B. Dawson, 1103 Harlem Ave., both of Baltimore.

Md., Baltimore.—Laundry.—Mrs. Kate McKenna, 2010 Homewood Ave., is having plans prepared by Baldwin & Pennington, Professional Bldg., Baltimore, for building at 312-14 N. High St.; two stories; brick; 58x57 feet.

Mo., Cassville.—Hardware.—Mitchell Hardware Co. incorporated with \$10,000 capital stock by S. M. Mitchell, W. H. Adams, L. B. Mitchell and others.

Md., Frostburg.—Publishing.—Mining Journal Publishing Co. organized with \$5000 capital stock; will acquire and operate plant of Frostburg Mining Journal.

Mo., Carthage.—Automobiles, Carriages, etc.—Lanphere Carriage & Auto Co. incorporated with \$15,000 capital stock by E. R. Lanphere, N. E. Lanphere and Thomas Hackney.

Mo., Kansas City.—Iron and Metal.—Sonken Iron & Metal Co. incorporated with \$100,000 capital stock by Herman Sonken, Geo. T. Cook and H. W. Lytle.

Mo., St. Louis.—Construction.—Lillie Construction Co. incorporated with \$10,000 capital stock by Max T. Lillie, Geo. M. Johnson and W. B. Lillie.

N. C., St. Pauls.—Hardware.—St. Pauls Hardware Co. incorporated with \$25,000 capital stock by L. H. Townsend, C. B. Rhodes, W. F. Townsend and others.

N. C., Winston-Salem.—Printing and Book-binding.—Stewart Bros. have plans by W. C. Northrup, Winston-Salem, for recently-noted additional story to plant; 25x96 feet; semi-fireproof construction; will install additional equipment. (See "Machinery Wanted.")

Okla., Cleveland.—Publishing.—Woodard & Fenton awarded contract to Collins & Wells, Cleveland, for erection of 25x50-foot publishing plant; fireproof; cost \$1750; plans by A. H. Mott, Bigheart, Okla.; machinery purchased. (Recently noted.)

Okla., Dewar.—Miners' Supplies.—Miners' Supply Co. (recently reported incorporated under "Miscellaneous Factories") with \$50,000 capital stock; will conduct established mercantile business; J. W. Hoffman of Kansas City, Mo. (not J. Koffman), is president.

Okla., Hobart.—Hobart Mill & Elevator Co. will rebuild elevator recently burned; reported to erect grain elevator and to install cleaning and feed-grinding machinery.

S. C., Greenville.—Fire-alarm System.—City will install fire-alarm system to cost \$8300.

S. C., Spartanburg.—Garage.—Mrs. Neel Vernon awarded contract to E. L. Hertzog, Spartanburg, for erection of garage; one story brick; 112x75 feet; plans by L. D. Proffitt, Spartanburg. (Recently noted.)

Tenn., Chattanooga.—Lime and Coal.—Monarch Lime & Coal Co. incorporated with \$5000 capital stock by Wm. E. Thompson, Howell-Turner, Frank Taylor and others.

Tenn., Coal Creek.—Coal Creek Electric Light Co. is arranging to establish ice plant and laundry in connection with electric-light plant.

Tenn., Knoxville—Marine Ways.—Oliver King will construct \$15,000 marine ways; install two hoisting engines; erect warehouse, dwellings, etc.

Tenn., Nashville.—W. F. Myers incorporated with \$5000 capital stock by W. F. Myers, E. T. Kayne, B. E. Britt and others.

Tenn., Nashville.—Cut Stone.—Southern Cut Stone Co. incorporated with \$50,000 capital stock by T. L. Herbert, R. T. Creighton, Robert Elliott and others.

Tex., Beaumont—Distributing Plant.—Josey Miller Co. has plans by H. C. Mauer, Beaumont, for distributing plant to be leased to National Biscuit Co. of New York; 50x120 feet; brick; mill construction; cost \$10,000; bids opened. (Recently noted.)

Tex., Beaumont—Naval Stores.—Naval Stores Marketing Co. incorporated with \$50,000 capital stock; Newton R. Wilson, president; Nuechis Chipley, vice-president; N. J. Daly, secretary-treasurer; will erect supply and storage station.

Tex., Brownsville—City Slaughter-house.—City will vote March 14 on \$3000 bond issue to repair city slaughter-house. Address The Mayor.

Tex., San Antonio—Marble and Granite Works.—San Antonio Marble and Granite Works incorporated with \$2500 capital stock by C. H. Moeller and others.

Tex., San Antonio—Fuel.—Mission Fuel Co. incorporated with \$5000 capital stock by J. R. Baldwin, I. L. Carney and John Stricker.

Tex., Seguin—Garage.—C. F. Blumberg will erect garage; concrete block and stone; 60x80 feet; cost \$5000.

Tex., Victoria—Navigation.—Guadalupe River Navigation Co. incorporated with \$11,000 capital stock by J. J. Welder, F. B. Lander, J. A. McFadden and others.

Tex., Victoria—Garage.—Fred Evertson will probably erect garage.

Va., Newport News—Flinch estate awarded contract at \$4740 to M. W. Gayle, Newport News, for erection of building; two stories; brick; fireproof; 25x60 feet; reinforced concrete floors; partitions of steel laths and cement; will be occupied by John Austrian, for dyeing and cleaning plant. (Recently noted under "Stores.")

Va., Norfolk—Iron.—Norfolk Iron Corporation incorporated with \$125,000 capital stock; Paul R. Howard, president, Norfolk; A. Brinkley, vice-president, Portsmouth, Va.

Va., Richmond—Publishing.—Presbyterian Company incorporated with \$50,000 capital stock; T. S. Wilson, president; E. R. McClure, vice-president; W. S. Campbell, secretary; will publish The Presbyterian of the South.

Va., Staunton—Printery.—Valley Printing Co. incorporated with \$10,000 capital stock; Thomas H. Russell, president; T. J. Roller, vice-president; C. D. Shultz, secretary-treasurer.

W. Va., Charleston—Stoves.—Weston Stove Co. incorporated with \$15,000 capital stock by H. P. Boone, L. A. Boone, Lee J. Martin and others.

W. Va., Keystone—Automobiles.—McDowell County Automobile Co. incorporated with \$5000 capital stock by J. K. Steele, H. B. Reynolds, F. T. Hutson and others.

W. Va., Morgantown—General Contracting.—Patterson, Moran & Luck Company incorporated with \$50,000 capital stock by H. M. Luck of Roanoke, Va.; J. W. Patterson, Jr., and J. E. Moran of Pittsburg, Pa., and others.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Beverages.—Jefferson County Nova-Kola Co. incorporated with \$50,000 capital stock; Fred Averett, president; C. R. Porter, vice-president; L. A. Porter, secretary-treasurer.

Ala., Birmingham—Bakery.—American Bakeries-Candies Co., J. E. Ramsey, president, 2017 Avenue A, awarded contract to Connor & Co., Birmingham, for erection of recently-noted additional story to plant; cost \$5000; no equipment needed.

Ala., Birmingham—Leather Goods.—Birmingham Leather Co. incorporated with \$6000 capital stock; T. A. Gambino, president; Leo Sundheimer, vice-president; Max H. Mayer, secretary-treasurer.

Ala., Gadsden—Washing Machines.—C. I. Donahue proposes establishment of plant to manufacture clothes-washing machines.

Ark., Ashdown—Creamery.—O. D. Turner and A. B. Wilson are promoting establishment of creamery.

Ark., Dewitt—Creamery.—W. H. Echols and Edward Rankin of Faxon, Okla., will establish creamery. (See "Ice and Cold Storage Plants.")

Ark., Fort Smith—Spring Beds and Mat-

trasses.—Acme Spring Bed & Mattress Co., E. B. Hempstead, president, will erect addition to stock and machine rooms recently noted; mill construction; will let contract locally; machinery purchased.

Ark., Fort Smith.—Three "B" Feather Duster Co., Buchanan, Mich., will establish plant; utilize 16,000 square feet floor space.

D. C., Washington—Famol Products.—Famol Products Co. incorporated with \$100,000 capital stock by Thos. H. Braden, 70 Seaton Pl. N. W., Edw. P. Mertz, 3031 Newark St. N. W., and Stanton C. Peelle, 37-38 Kellogg Bldg.; C. C. Green, general manager.

D. C., Washington.—Pompeian Company, 702 5th St. N. W., awarded contract to Boyle-Robertson Construction Co., Union Trust Bldg., Washington, for office and factory building at 220 13th St. S. W.; three stories; 27x150 feet; fireproof; lined with pressed brick; cost \$25,000; plans by Frank G. Pierson, 1355 Oak St. N. W., Washington.

Fla., Pensacola—Household Articles.—W. C. Jones of Tallahassee, Fla., proposes establishment of \$50,000 company to manufacture household articles.

Fla., Ybor City, Ind. Sta., Tampa.—Mrs. F. Haya awarded contract to M. V. Cole, Tampa, for repairing cigar factory recently burned; cost \$14,000. (Recently noted.)

Ga., Columbus—Bottling.—Union Bottling Works incorporated with \$30,000 capital stock by C. A. Hatcher, W. E. Anthony and others.

Ga., Cobb—Turpentine.—Cobb Turpentine Co. incorporated with \$20,000 capital stock by J. D. McLaughlin, Wright Torrence and W. E. James.

Ga., Macon—Overalls.—Lee Hupp will erect four-story overall factory; cost \$20,000.

Ga., Savannah—Candy.—Savannah Candy Factory will probably rebuild plant reported burned; loss \$45,000.

Ky., Louisville—Vinegar.—Jones Bros., Castleman & Blakemore will erect addition to vinegar factory; brick; two and three stories; 35x52 feet; cost \$20,000.

La., Abbeville—Sugar.—W. D. Gooch, R. J. Labauve, W. S. Durke and others are promoting establishment of central sugar factory.

La., Baton Rouge—Oil Refinery.—Standard Oil Co. of Louisiana purchased, it is reported, 150 acres of land and will double plant; New York office at 26 Broadway.

La., Opelousas—Peanut Oil.—St. Landry Cotton Oil Co. will install peanut-crushing plant.

La., New Iberia—Sugar.—Segura Sugar Factory is reported as contemplating increasing capacity of plant 1000 tons daily.

La., New Orleans—Shoes.—Linenberg Shoe Factory, H. Linenberg, president, is having plans prepared by F. W. Crosby, Denegre Bldg., New Orleans, for shoe factory.

Md., Baltimore—Corks and Seals.—Crown Cork & Seal Co., Guilford Ave. and Oliver St., awarded contract to George Bunnecke & Sons, 305 St. Paul St., Baltimore, for alterations to five-story building on Guilford Ave. between Oliver St. and Girard Ave.; cost \$2500.

Md., Baltimore—Jewelry, etc.—Jacobs Supply Co. incorporated with \$5000 capital stock by Frank X. Huthmann, 54 Gorsuch Ave., Wm. D. Jacobsen, 2513 Madison Ave., and Jos. S. Jacobs, 301 N. Mount St.

Md., Baltimore—Elevator Safety Device.—Roth Elevator Safety Co. incorporated with \$50,000 capital stock by August A. Roth, 2027 E. Baltimore St.; J. F. Corall, Jr., both of Baltimore, and E. R. Cochran of Wilmington, Del.

Md., Baltimore—Paper Boxes.—Columbia Paper Box Co. incorporated with \$10,000 capital stock by Geo. L. Geo. A. and Wm. Wallace, all of 1727 Pennsylvania Ave.

Md., Baltimore—Wearing Apparel.—Excello Mfg. Co. incorporated with \$5000 capital stock by Isaac Parrill, Morris Parrill, both of 1911 N. Monroe St., and Israel L. Weinstein.

Md., Darlington—Creamery.—Darlington Co-operative Creamery (recently noted) has not been organized; O. Presspick & Co., 103 Park Ave., New York, are promoters.

Mo., Springfield—Window Attachments, etc.—Springfield Novelty Manufacturing Co. incorporated with \$5000 capital stock; will erect factory and equip to manufacture window attachment and other novelties.

Md., Midland—Shirts.—Wm. B. Phillips and L. J. Ort plan establishment of shirt factory.

Miss., Laurel—Gas Plant.—J. T. Pullen and associates have received franchise to establish gas plant recently noted. (See "Machinery Wanted.")

Miss., Moss Point.—F. L. Brown of Chicago, Ill., has franchise to establish gas plant.

Mo., Kansas City—Fire-escapes, etc.—Ralston Sheet Metal & Iron Works Co., 2643 Southwest Blvd., will erect plant to more than double capacity.

Mo., St. Louis—Water Heaters.—Martels Water Heater Co. incorporated with \$10,000 capital stock by Charles von Martels, H. W. Martels and J. E. Diamond.

Mo., St. Louis—Paper Boxes.—Owens Paper Box Co. incorporated with \$20,000 capital stock by Jackson J. Owens, Jos. P. Connor, Louis Spielbrink and others.

Mo., St. Louis—Gas Fixtures.—Gross-O'Reilly Chandelier Co. incorporated with \$45,000 capital stock by E. L. Gross, Fred Carr, H. A. Krueger and others.

Mo., St. Joseph—Cloaks and Suits.—Novelty Cloak & Suit Co. incorporated with \$10,000 capital stock by Frank L. Newman, Samuel Rositzky and others.

Mo., St. Louis—Shirtwaists, etc.—Direct Cloth Manufacturing Co. will occupy building at 2244-48 Eugenia St. for manufacturing shirtwaists and skirts.

Mo., St. Louis—Flooring.—Chemical Floor & Tile Co. incorporated with \$150,000 capital stock by Daniel F. Rose, Jr., Edward P. Wiels and others.

Mo., St. Louis—Water Heaters.—Martell Water Heater Co. incorporated with \$10,000 capital stock by H. F. Martell, J. E. Diamond, C. E. Martell and others.

Mo., St. Louis—Menographs.—American Menograph Co. incorporated with \$4000 capital stock by John D. Smith, John C. Graham and McRee Smith.

Mo., St. Louis—Drugs.—United Drug Co. incorporated with \$100,000 capital stock by Ewan Smith, Nat Steiner and others.

Mo., St. Louis—Beverages.—American Beverage Co. incorporated with \$25,000 capital stock by L. S. Roberts, E. M. Roberts and A. F. Fleming.

Mo., St. Louis—Motor Vehicles.—Steinhauer Truck & Motor Car Co. incorporated with \$250,000 capital stock by Peter B. Probst, Wm. Frickenschmidt, Alonzo Dryer and others.

N. C., Charlotte—Implements.—Farmers' Implement Co. incorporated with \$50,000 capital stock by M. F. Trotter, J. Floyd Ranson and J. A. Russell.

N. C., Washington—Brooms.—Eastern Broom Manufacturing Co. will establish broom factory; will occupy rented building; cost of machinery, \$1000; daily capacity, 40 dozen brooms; F. C. Walling, president; M. A. Tankard, secretary-treasurer; W. B. Walling (recently noted interested) is manager.

N. C., Wilmington—Gas Works.—Tidewater Power Co., recently noted (under "Electric Light and Power") to make power-plant improvements, will also enlarge gas works' capacity by adding six-foot water-gas set, relief holder of approximately 80,000 cubic feet capacity, and larger mains throughout city.

N. C., Winston-Salem—Mirrors.—Standard Mirror Co. awarded contract to Fogle Bros., Winston-Salem, for erection of addition to factory building; one story; corrugated iron; composition roof; electric lighting; cost \$1000.

Okla., Kiefer—Gasoline Plant.—D. W. Franchot & Co., Tulsa, Okla. (recently noted to establish gasoline plant of 700 gallons daily capacity), will erect 75x32-foot galvanized steel and two one-story cement buildings 12x12 and 18x18 feet in size; fireproof; cost of plant complete \$10,000; architects, Huguenin & Sevearingen, Tulsa; E. G. Fike & Co., Tulsa, contractors; cost of machinery \$5000. Company proposes to install other plants for making gasoline from natural gas without cooling agents.

Okla., Enid—Registers.—Ostrom Register Co. incorporated with \$15,000 capital stock by G. E. Osborn, C. F. Hoyt, both of Costos, Okla., and M. B. Cooley of Enid.

Okla., Muskogee—Building Plaster.—United States Kellastone Co. of Terre Haute, Ind., will, it is reported, establish plant to manufacture building plaster; cost \$50,000.

Okla., Sapulpa—Gasoline.—Oklahoma Natural Gasoline Co. incorporated with \$25,000 capital stock by M. B. Davis, O. M. Noble, F. E. Shryock and others.

Okla., Tulsa—Glass.—Geo. D. Carney, secretary, advises that Tulsa Glass Co. plans to build additional melting furnace this summer. (Report of larger improvements incorrect.)

S. C., Columbia—Airships.—United States Aero Publicity Co. is being organized by E. S. Ward of Toronto, Canada, and W. G. Howard of Columbia; plans to establish plant to manufacture airships.

Tenn., Nashville—Medicine.—Cottage Home Remedy Co. incorporated with \$5000 capital

stock by B. B. Coffey, W. C. Brown, J. W. Prickett and others.

Tenn., Nashville—Resilient Wheels.—Anderson Resilient Wheel Manufacturing Co., Stahlman Bldg., incorporated with \$500,000 capital stock by O. H. Anderson, S. P. Parks, James N. Cox and others; will manufacture automobile wheels.

Tenn., Nashville.—H. G. Hill Grocery Co. will erect \$3000 bakery.

Tenn., Knoxville—Chemicals.—Broto Chemical Co. incorporated with \$5000 capital stock by Harry S. Brown, James C. Todd, Wm. A. Lusk and others.

Tenn., Union City—Waterproof Coats.—Canvas Decoy Co. reincorporated and increased capital stock from \$30,000 to \$100,000.

Tex., Austin—Lime.—Austin White Lime Co. increased capital stock from \$50,000 to \$100,000.

Tex., Comanche—Creamery.—S. B. Todd will establish sanitary dairy farm and creamery.

Tex., El Paso—Oil Refinery.—Warren Refining Co. incorporated with \$3000 capital stock by E. L. Peyton, Albert Carter and Wm. T. Zorn.

Tex., Taylor—Leather Goods.—Madison & Co., St. Louis, Mo., will establish leather-goods factory.

Tex., Victoria—Ice Cream.—L. R. Holloway and E. A. Way will establish ice cream factory in Thurmond Bldg.; machinery purchased.

Tex., Waco—Gas.—Waco Gas Co. awarded contract for addition to gas plant; will install larger steam turbine with normal capacity of 2000 kilowatts or 3000 horse-power, capable of carrying 50 per cent. additional load when required; will give plant total capacity of 7500 horse-power; will also install surface condenser with pumping equipment, additional boiler and stoker; construct concrete foundation for machinery; cost of improvements, \$50,000.

Va., Farmville—Ice Cream.—Farmville Creamery Association (in connection with Farmville Ice Plant) contemplates installing ice cream machinery. (See "Machinery Wanted.")

Va., Graham—Gas.—W. E. Ross of Bluefield, W. Va., applied for gas franchise.

Va., Richmond—Ice-cream.—Purity Ice Cream Corporation incorporated with \$100,000 capital stock; A. A. Chapin, president; S. C. Redman, vice-president; both of 1st and M Sts. N. E., Washington, D. C.; Chas. Ross, secretary-treasurer, of Richmond; will erect three-story fireproof building 215x152 feet; cost \$80,000; construction begun. (Lately noted.)

Va., Roanoke—Tramways.—Consolidated Tramway Co. organized with W. C. Lawson, president, Roanoke; L. B. Keene Claggett, vice-president, Calvert and German Sts., Baltimore, Md.; M. M. Caldwell, secretary, Roanoke; will establish \$25,000 plant to manufacture aerial tramways, car equipment for same; also automobile loading and dumping devices; will open proposals March 1 and award contract to local contractor for erection of 120x40-foot 10,000 fireproof building; equipment to be installed. (See "Machinery Wanted.")

Va., Woodstock—Bakery.—D. P. Magruder is interested in proposed erection of bakery; daily capacity, 1500 loaves. (See "Machinery Wanted.")

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, SHEDS, ETC.

Ky., Maysville—Chesapeake & Ohio Railway, F. I. Cabell, chief engineer maintenance of way, Richmond, Va., will, it is reported, construct turntable costing \$10,000.

Miss., Gulfport—Gulf & Ship Island Railroad, W. H. Gardner, Jr., chief engineer, will issue \$500,000 of bonds to enlarge and improve shops and provide for additional harbor and docking facilities.

ROAD AND STREET WORK

Ala., Birmingham.—City will undertake certain grading, macadamizing, curbing, gutter, sidewalk, vitrified brick, bitulithic and natural sheet asphalt paving; bids opened February 15; Maury Nicholson, City Engineer.

Ala., Eutaw.—City will construct 8500 square yards tar-cap macadam street paving, 2500 linear feet cement curbing, 2150 square yards cement sidewalks; bids received until February 27; John W. Cook, Mayor. (See "Machinery Wanted.")

Ala., Selma.—Dallas county will construct five miles of road in southern part of county; bids will soon be invited; will also construct road from Marion Junction to Orr-

ville, distance of 15 miles, contract for which will soon be awarded. Address County Commissioners.

Ark., Helena.—City will pave streets. Address The Mayor.

Fla., Jacksonville.—Duval county will complete grading on Mandarin Rd.; bids received until February 24; Gail L. Barnard, County Engineer, Room 9, Courthouse. (See "Bridges, Culverts, Viaducts.")

Fla., Jacksonville.—Duval county will pave portion of Lincoln Ave.; bids received until February 24; Gail L. Barnard, County Engineer, Room 9, Courthouse. (See "Machinery Wanted.")

Fla., Macclenny.—Baker County Commissioners will construct hard-surfaced road in vicinity of Glen St. Mary, Fla.

Fla., Palatka.—City awarded contract to H. S. Jaudon Engineering Co., Savannah, Ga., at \$9.6 cents per square yard for construction of 1700 square yards granolithic sidewalks.

Fla., Tampa.—Hillsboro County Commissioners awarded contract to T. L. Hackney of Tampa to construct one and a half miles of road to connect with property of Tampa Bay Land Co.

Fla., West Palm Beach.—City will vote March 21 on issuance of \$55,000 of bonds for improvement of streets, docks and sewers and construction of seawall along Lake Worth; J. B. McGinley, Mayor. (Recently incorrectly noted under Fla., Palm Beach.)

Ga., Waycross.—City contemplates paving sidewalks on principal streets; bids for about 10,000 yards of concrete walk will be invited at first. Address The Mayor.

La., New Orleans.—City awarded contract to John A. Craven & Co. of New Orleans at \$18,524.70 for constructing sub-surface drains, curbs and gutter bottoms in Milan St. from South Franklin to South Claiborne St., and at \$7533.30 on Pine St. from Magnolia to Jeannette St.; to Southern Bitulithic Co. at \$19,119 for repaving Milan St., and Barber Asphalt Paving Co. at \$8688 for paving Pine St.

Md., Baltimore.—Board of Estimates approved plans submitted by Commissioners for Opening Streets for widening Belair Rd. from North Ave. to city limits; road is to be widened from 40 to 80 feet, and is estimated to cost \$70,000; improvement will connect with that being made by Good Roads Commission; Park Board also submitted plans for section of boulevard to be constructed between Druid Hill and Gwynn's Falls Parks, estimated to cost \$80,000; ordinances introduced in City Council providing for both improvements; James H. Smith, president Commissioners for Opening Streets, City Hall.

Md., Baltimore.—John J. Watson, Calvert Bldg., will expend \$2500 for street improvements.

Md., Chestertown.—Town Commissioners decided to pave streets with stone or slag.

Md., Easton.—Talbot and Caroline counties will grade and macadamize .83 mile of Dover Bridge Rd.; work includes pivot drawbridge and 70-foot steel span over Choptank River, together with necessary piers, abutments, fender work, etc.; bids received until February 27; Joseph B. Harrington, clerk Commissioners of Talbot County, Easton; William H. Anderson, clerk Commissioners of Caroline County, Denton, Md. (See "Machinery Wanted.")

Md., Roland Park.—Baltimore Suburban Sewerage Co., Albert H. Wehr (president Baltimore County Water & Electric Co.), 100-102 W. Fayette St., Baltimore Md., president, will construct boulevard from Roland Park to Green Spring Valley, distance of four miles; boulevard will be macadamized and oiled and supplemented for about three miles by driveway; sidewalks will be laid on each side to have uniform width of 30 feet; driveway is to be 20 feet wide. (See "Land Developments.")

Miss., Clinton.—City will lay five-foot concrete sidewalk on Mississippi College campus to Alabama & Vicksburg Railroad, distance of one-half mile. Address The Mayor.

Miss., Mendenhall.—Simpson County Board of Supervisors awarded contracts to Tom Buffington of Mendenhall for road improvements in Beats 1 and 5; to Pete Buffington for road improvements in Beat 2, and to Cleveland Shivers for road improvements in Beats 6 and 4; \$40,000 bond issue available; J. F. Thomas, clerk. (Recently mentioned.)

Miss., Meridian.—Good Roads Commissioners adopted plans and specifications of W. P. Moore, engineer, as to location and grading of Marion and Poplar Springs roads.

Mo., St. Louis.—Board of Public Improvements will receive bids until February 21 for paving with vitrified brick Fassen, Liberty,

Leffingwell, South Dakota, Destrehan and other streets; reconstructing with refined asphalt 16th, 23d, 19th, 17th and other streets; reconstructing 13th St. with bitulithic; Delmar St. with pine blocks, etc.

N. C., Elizabeth City.—City awarded contract to Peters Bros. Paving Co., Chicago, Ill., at \$1.62 per square yard to pave Main and other residential streets with asphalt.

N. C., Pittsboro.—City will vote March 11 on issuance of \$5000 of bonds for street improvements. Address The Mayor.

Okla., Oklahoma City.—City will grade and pave W. 23d St. from Classen Blvd. to Ames Ave.; width 26 feet; bids received until February 20 and opened February 21; Bob Parman, City Clerk. (See "Machinery Wanted.")

Okla., Tulsa.—City will readvertise for bids for paving of Hodge St.; T. C. Hughes, City Engineer.

S. C., Sumter.—City voted February 14 on issuance of \$25,000 of bonds for paving business streets. Address The Mayor.

Tenn., Memphis.—City will petition Legislature for authority to issue \$750,000 of bonds, of which \$500,000 will be used in continuation of street-improvement work and \$250,000 for proposed construction of 11 subways; E. H. Crump, Mayor.

Tex., Beaumont.—City Council ordered repaving (probably with wood blocks) Pearl, Milam, Park and College Sts. in connection with laying of double tracks by street-car company; City Council also ordered paving of two blocks on Main St., one block on Washington St. and two additional blocks on College St.; C. L. Scherer, City Engineer.

Tex., Brownsville.—City will vote March 14 on issuance of \$80,000 of bonds for paving. Address The Mayor.

Tex., Dallas.—Board of Municipal Commissioners ordered bids for paving of Jefferson St. from 10th to Beckley St.; estimate is for 19,180.44 square yards paving at \$1.25 per square yard and 6049.9 feet of curbing and gutters at 65 cents per foot; total cost will be \$11,204.02 for property owners, \$10,513.15 for street-railway company and \$821.81 for city.

Tex., Fort Worth.—City will pave Texas St. with bituminous macadam and W. Belknap St. with bitulithic, vitrified brick, bituminous macadam or rock asphalt pavement; bids received until February 15; J. D. Trammell, City Engineer.

Tex., Grapeland.—Precinct No. 5 of Houston county voted issuance of bonds for construction of roads. Address Precinct Commissioners.

Tex., Stamford.—City has \$10,000 available for street paving recently noted; G. B. Gurvey, engineer in charge.

Va., Graham.—City will vote on issuance of \$10,000 of bonds for street improvements and sewer construction. V. L. Sexton, Mayor.

Va., Lebanon.—Russell county voted February 14 on issuance of \$275,000 of bonds for road improvement and construction. Address County Commissioners.

Va., Portsmouth.—City will pave London, Dinwiddie, Edinburg, Harrison, 5th and other streets; bids will soon be invited; W. O. Cassell, Jr., City Engineer.

Va., Portsmouth.—Road Commission of Norfolk county awarded contract to R. P. Denby of Norfolk, Va., at \$11,890.82 to macadamize two miles of Great Bridge Rd. in direction of Centerville. (Recently mentioned.)

Va., Richmond.—City will grade Tulip St. from Venable to Carrington St., and 22d St. from Carrington to Short St.; bids received until February 16; Charles E. Bolling, City Engineer.

Va., Spottsylvania.—Board of Public Roads, W. A. Harris, secretary, will open bids March 6 for construction of one and three-quarters miles macadam roads recently noted; material furnished by county; A. F. Brown, engineer in charge. (See "Machinery Wanted.")

Va., Tazewell County.—Tazewell county contemplates petition to Circuit Court for election to vote on \$500,000 bond issue for permanent road improvement; town of Graham to receive (provided bond issue carries) five miles of macadam road, 12 feet wide, or two and one-half miles, 24 feet wide; all roads to be constructed under State's supervision at cost of about \$4500 a mile; V. L. Sexton, Mayor of Graham.

Va., Waverly.—City voted issuance of \$7000 of bonds for street improvements and construction of electric-light plant. Address The Mayor.

SEWER CONSTRUCTION

Ark., Ashdown.—City will not at present consider construction of sewer system recently noted; F. A. Locke, Mayor.

Ark., De Queen.—City Council has been petitioned to organize improvement district

for construction of sewer system. Address The Mayor.

Fla., West Palm Beach.—City will vote March 21 on issuance of \$55,000 of bonds for improvement of sewer system, etc.; J. B. McGinley, Mayor. (See "Road and Street Work.")

Ga., Rockmart.—City will receive bids until March 7 for machinery, material and construction of sewer and water-works system; bond issue of \$35,000 previously noted voted. (See "Water-works.")

Ga., Senola.—City contemplates voting on issuance of bonds for construction of sewer system. Address The Mayor.

Md., Roland Park.—Baltimore Suburban Sewerage Co., Albert H. Wehr (president Baltimore County Water & Electric Co.), 100-102 W. Fayette St., Baltimore, Md., president, will construct gravity sewerage system, extending through Chestnut Hill, Hilltop Park, Mt. Washington Heights, Cheswood and Bancroft Park; system will include 30 miles of trunk line and disposal plant to be erected in valley of Jones Falls. (See "Land Developments.")

Md., Baltimore.—City will construct lateral sewers in District No. 15, Sanitary Contract No. 63; bids received until February 23; W. D. Platt, chairman pro tem of Sewerage Commission. (See "Machinery Wanted.")

Mo., St. Louis.—Board of Public Improvements, Room 300 New City Hall, will receive bids until February 17 for construction of sewers in Baden Sewer District No. 1. (See "Machinery Wanted.")

Miss., Marks.—City Council ordered \$5000 bond issue for sewerage and water-works. Address The Mayor.

S. C., Charleston.—City will construct pump pits and appurtenances for sewerage system; bids received until February 20; J. H. Dingle, City Engineer. (See "Machinery Wanted.")

S. C., Cheraw.—City will vote on issuance of \$70,000 of bonds for construction of sewer system and water-works. Address The Mayor. (See "Water-Works.")

Tenn., Newport.—City will vote on issuance of \$50,000 of bonds for construction of sewer system and water-works. Address The Mayor.

Va., Graham.—City will vote on issuance of \$10,000 of bonds for sewer construction and street improvements; V. L. Sexton, Mayor.

TELEPHONE SYSTEMS

Ky., Bowling Green.—Bowling Green Home Telephone Co. will expend \$10,000 for extensions to system.

Ky., Whitesburg.—Eastern Kentucky Home Telephone Co., M. Starkey, general manager (recently noted to have purchased line of Whitesburg Telephone Co. and Letcher County Home Telephone Co.), will install exchange in Whitesburg, rebuild toll lines and connect with other distance lines from Stonega, Va., to Pikeville, Ky., etc.; main office, Pikeville.

N. C., Poindexter.—Poindexter Telephone Co. incorporated with \$3500 capital stock by O. J. Martin, H. J. Mickey and others.

Okla., Monroe.—Monroe Telephone Co. incorporated by C. E. Riggan, J. H. Banning, B. D. Woodson and others.

S. C., Greenville.—Southern Bell Telephone & Telegraph Co., Atlanta, Ga., awarded contract to Jamison & Morris for erection of telephone exchange on Laurens St.; three stories and basement; 41x61 feet; fireproof; reinforced concrete and brick construction; reinforced concrete and tile floors; construction under supervision of F. H. & J. G. Cunningham; George J. Yundt, Atlanta, Ga., engineer in charge. (Recently noted.)

Tenn., Arlington.—R. S. Donaldson, Sr., Rev. A. Street and S. Y. Wilson are interested in establishment of telephone system.

Va., Claudeville.—Three-Fork Telephone Co. incorporated with \$5000 capital stock; A. T. Jessup, president; J. A. Barnard, secretary-treasurer; W. H. Waller, vice-president.

TEXTILE MILLS

Ky., Louisville.—Woolen Goods.—Nuxol Woolen Co. incorporated with \$35,000 capital stock by John W. Nuxol, Martin J. Doll and Benjamin C. Leeming.

Mo., St. Louis.—Oil Cloth.—National Oil Cloth Co. incorporated with \$75,000 capital stock by William Nesbitt, R. N. Stubbs, James Bennett and others; will install machinery for daily output of 24,000 yards of oil cloth. (Lately mentioned.)

N. C., Lexington.—Sheetings, etc.—Wennonah Cotton Mills Co., lately reported incorporated with \$125,000 capital stock, takes over Wennonah Cotton Mills, heretofore

owned by W. E. Holt, Jr., one of company's incorporators; equipment is 11,856 ring spindles, 426 broad looms, etc.

S. C., Greenville.—India Lawns, etc.—Westervelt Mills awarded contract for erection of buildings for 50,000-spindle and 1200-loom plant; buildings, dimensions, character of construction and other details heretofore stated; contractor is Gallivan Building Co. of Greenville.

Tenn., Chattanooga.—Waterproof Cloth.—Cook Husbands and Dr. Winston of Paducah, Ky., plan organization of company to manufacture waterproof cloth.

Tenn., Maryville.—Hosiery.—Maryville Hosiery Mills will install additional machinery; has awarded contract.

Va., Basic City.—Woolen Blankets.—Basic Woolen Co. has purchased Blue Ridge Woolen Co.; plant includes two two-story buildings, 54x150 feet each; 1000 spindles, 40 looms, etc. (Lately reported incorporated with \$75,000 capital stock.)

WATER-WORKS

Ark., Ashdown.—City will not at present consider construction of water-works recently noted; F. A. Locke, Mayor.

Ark., Snyder.—City voted issuance of \$40,000 of bonds for extension of water-works and electric-light systems. Address The Mayor.

Fla., St. Petersburg.—Water-works committee, C. B. McClung, chairman, is having plans prepared for reservoir; 50 feet long, 75 feet wide and 8 feet deep; capacity about 225,000 gallons of water; walls to extend three feet above surface; exterior of walls to be of brick and interior to have coating of cement; top will probably be screened.

Ga., Rockmart.—City will receive bids until March 7 for machinery, material and construction of water-works and sewerage systems; previously noted to have voted \$35,000 bond issue; J. B. McCrary Company, engineer, 1211 Empire Bldg., Atlanta, Ga. (See "Machinery Wanted.")

Ga., Senola.—City contemplates voting on issuance of bonds for construction of water-works. Address The Mayor.

La., Houma.—City purchased 25 acres and will construct reservoir to have capacity of about 30,000,000 gallons of water; also contemplates installing filtering plant. Address The Mayor.

Md., Baltimore.—Water Board expects to have plans prepared, property acquired and other arrangements completed so that contracts can be awarded in spring by Board of Awards for construction of dam in valley of Gunpowder River and filtration plant at Lake Montebello; dam is to be 100 feet high, 700 feet long, contain 100,000 cubic yards of masonry work and impound about 21,000,000 gallons of water; reservoir will cover about 2500 acres; cost of reservoir, filtration plant and other work in connection with improvement of water system is estimated not to exceed \$5,000,000, amount of loan. Alfred M. Quick is water engineer. (Previously announced.)

Miss., Marks.—City Council ordered \$5000 bond issue for water-works and sewerage. Address The Mayor.

Okla., Sentinel.—City will vote in March on issuance of \$3000 of bonds for extension of water-works. Address The Mayor.

S. C., Cheraw.—City will vote on issuance of \$70,000 of bonds for construction of water-works and sewer system; amount will be supplemented by \$20,000 remaining from previous bridge bond issue. Address The Mayor.

S. C., St. George.—City will probably vote on issuance of \$17,000 of bonds for construction of water-works and electric-light system. Address The Mayor.

Tenn., Arlington.—City contemplates voting on issuance of \$3000 of bonds for construction of water plant; W. A. Taylor, Mayor.

Tenn., Dayton.—City has as yet no plans for proposed water-works; K. M. Benson (not K. McNelson as recently stated), Mayor.

Tenn., Dyer.—City contemplates construction of water-works; has petitioned Legislature for authority to issue bonds; 40,000 gallons capacity; will construct 1000 reservoir, brick engine-house to cost \$2000, and 40,000-gallon tower and tank; install machinery; cost \$20,000; date of opening bids not set; R. C. Houston, 1219 Central Bank Bldg., Memphis, Tenn., is preparing plans; R. B. McDaniel, Mayor.

Tenn., Memphis.—Water Commission, Wirt J. Wills, chairman, will ask Board of City Commissioners for right to petition Legislature for authority to issue \$500,000 of bonds for improvements and extensions to water

system that will be necessary within next two years; Water Department awarded contract for 2000 tons of cast-iron pipe to be used during coming year, amounting to about \$50,000; board contemplates installing system of feed-water heaters at East End plant for heating water before it enters boilers; plans have been prepared for warehouse, to be two stories, concrete and brick, 129x62 feet, and cost \$20,000 to \$25,000; structure will be located on railroad tracks, and heavy traveling crane will be constructed for lifting pipe and other material from cars, while another traveling crane will be built in center of warehouse by which material can be delivered into different bins and departments; \$500,000 bond issue will be expended in addition to proceeds of sale of \$100,000 of bonds remaining unsold from last issue authorized by Legislature.

Tenn., Newport.—City will vote on issuance of \$50,000 of bonds for construction of water-works and sewer system. Address The Mayor.

Tex., Brady.—City will vote March 25 on issuance of \$40,000 of bonds for securing new water supply; proposed to construct two dams across Brady Creek and install pumping and filtering plant; estimated cost \$32,000. Address The Mayor.

Tex., Caldwell.—City will vote March 7 on issuance of \$6000 of bonds for recently noted improvements to water-works; J. A. Gray, Mayor.

Tex., Brownsville.—City will vote March 14 on issuance of \$35,000 of bonds to extend water-works. Address The Mayor.

Tex., Georgetown.—City, R. E. Ward, Mayor, rejected all bids for laying C. I. pipe, furnishing hydrants and valves, building of power-house and surface reservoir for water-works extension recently noted; new tenders will be received February 21; contract for alternator, etc., awarded; E. H. Lancashire, engineer, Dallas, Tex. (See "Machinery Wanted.")

Tex., Kirbyville.—Fleming-Morton Company, J. W. Fleming, president, will not at present construct water-works recently noted.

Tex., Olney.—City voted issuance of \$10,000 of bonds for construction of water-works. Address The Mayor.

Tex., Polytechnic.—Polytechnic Commission approved partial report submitted by Engineer John Meade, Fort Worth, Tex., for water-works; Mr. Meade recommends laying of 4, 6 and 8-inch mains, drilling of artesian well to depth of 1000 to 1200 feet, and erection of elevated tank 115 feet high with capacity of 15,000 gallons; cost \$26,000.

Tex., Sunset.—Sunset Heights Water, Light & Power Co. incorporated with \$20,000 capital stock by Richard Rodgers, B. R. Hardin and W. E. Courtney.

Va., Graham.—City will vote on issuance of \$15,000 of bonds for water-works; V. L. Sexton, Mayor.

Va., Luray.—City's plans for extension and improvement to water-works (bond issue of \$10,000 recently noted voted) includes concrete intake dam, 10,000,000-gallon reservoir, pipelaying and earthwork; gravity flow of freestone water from mountain stream; cost \$17,300; date of opening bids not set; N. Wilson Davis, engineer in charge, Harrisonburg, Va.; will require 500 feet of 6-inch and 13,400 feet of 4-inch cast-iron pipe. Address proposals to S. O. Judd. (See "Machinery Wanted.")

WOODWORKING PLANTS

Ark., Pochontas.—Staves and Headings.—Grafton Stave & Heading Co., Grafton, Ill., will equip with machinery from Grafton the plant to be established on 51 acres recently noted purchased at Pochontas.

Fla., Key West.—Cigar Boxes.—Norberg Thompson will erect cigar-box factory; one story; 50x200 feet; capacity 10,000 boxes daily; plans for building prepared; machinery selected.

Ga., Macon.—Handles.—Standard Handle Co. incorporated with \$10,000 capital stock by Horace A. Wright, W. A. Roush and F. M. Delk.

Mo., Marston.—Cooperage.—Marston Cooperage Co. (recently reported incorporated with \$10,000 capital stock) will install machinery to manufacture barrels; O. B. Guinn, president and manager; Seth S. Barnes, vice-president; Mr. Phillips, secretary; O. Ankershield, treasurer. (See "Machinery Wanted.")

N. C., Thomasville.—Chairs.—Cramer Furniture Co. is ready to receive bids on rebuilding portion of burned plant recently noted; to include five buildings, 50x200 feet, 70x120 feet, 30x80 feet, 60x60 feet and 50x60 feet, varying in height from one to three stories; cost of machinery, \$25,000; machinery proposals will open March 1; daily

capacity, 2000 chairs. (See "Machinery Wanted.")

N. C., Wadesboro.—Furniture.—Gathings Furniture Co. incorporated with \$100,000 capital stock by C. J. Gathings and others.

N. C., Statesville.—Showcases.—Statesville Show Case Co. awarded contract to D. A. Morrison, Statesville, for rebuilding burned plant recently noted; three stories; 40x97 feet; mill construction; plans by James M. Ramsey, Statesville; machinery purchased.

Okl., Muskogee.—Handles, etc.—Oklahoma Hardwood Manufacturing Co. will establish plant for manufacturing axe and shovel handles, flooring, etc.; cost about \$25,000.

Tenn., Chattanooga.—Furniture.—Chattanooga Furniture Co. awarded contract to Adams & Schneider, Room 8, Adams Block, Chattanooga (not Evans & Schneider, as recently stated), for erection of 36x233-foot building; ordinary construction; cost \$10,000.

Tenn., Knoxville.—Flooring.—Masters' Patent Floor Co. incorporated with \$50,000 capital stock by John F. Masters of Durham, N. C.; W. D. Hogan, Eugene Galyon, C. S. Agee and Hazen House of Knoxville, Tenn.; will establish plant near Magnolia Park, north of Knoxville, for manufacture of patented hardwood flooring; flooring bolted together in sections.

Tex., Fort Worth.—Wagons.—Fort Worth Wagon Factory incorporated with \$151,000 capital stock by Paul Waples, B. J. Tillar, Warren Heaton and C. Hightower.

Va., Lynchburg.—Wagons.—Thornhill Wagon Works awarded contract to C. W. Hancock & Son of Lynchburg to erect main factory building; 100x600 feet; one story; mill construction roof; brick walls; concrete floors; will be equipped with automatic sprinkling apparatus; cost about \$90,000; will also erect frame office building upon brick foundation; smaller structures will be erected later. (Recently mentioned.)

BURNED

Ala., Eufaula.—Eufaula Light, Gas & Power Co.'s electric-light plant; estimated loss \$15,000.

Ark., Bigelow.—Fourche River Lumber Co.'s oilhouse and blacksmith shop.

Ark., Brinkley.—J. J. Farrell's cotton gin.

Ark., Fort Smith.—W. S. Kelleam's bottling plant; loss \$3500.

Ark., Greenwood.—Fidelity Fuel & Mining Co.'s fanhouse.

Ark., Rogers.—P. M. Gresley's barn; estimated loss, \$4000.

Ga., Atlanta.—Asa B. Candler, Jr.'s garage; loss \$20,000.

Ga., Arabi.—B. H. Bedgood's barn; loss \$3000.

Ga., Savannah.—Savannah Candy Factory, loss \$45,000; Atlantic Coast Line Railroad's grain and delivery warehouses damaged, loss \$25,000; E. B. Pleasants, chief engineer, Wilmington, N. C.

Ga., Vidalia.—Vidalia Casket & Coffin Co.'s plant; loss \$35,000.

Ga., Waresboro.—Atlantic Coast Line Railroad's depot; loss \$5000; E. B. Pleasants, chief engineer, Wilmington, N. C.

Md., Walkersville.—William A. Cramer's barn; loss about \$4000.

Miss., Bexley.—Hotel owned by Green County Lumber Co., main office, Lucedale, Miss.; loss \$3000.

Mo., Brunswick.—Brown Hotel.

Mo., Brunswick.—Brown Hotel; loss \$5000.

N. C., Wadesboro.—J. D. Horne's building, loss \$6000; James A. Hardison's building, loss \$6000; Wheeler Harness Co.'s plant, loss \$8000.

Okl., Altus.—Altus Hotel, owned by J. Q. Wigginton; Baucum Building.

Tenn., Memphis.—L. M. Woolvine Company's paper-box factory; loss on stock and machinery estimated at \$45,000; building owned by R. E. and B. G. Lee; estimated loss \$15,000.

Tenn., Nashville.—Homestead Bldg., owned by Baxter estate, damaged; loss \$15,000.

Tenn., Newport.—Plant of Newport Plain Talk, B. I. Susong, editor, loss \$3000; Jas. H. Walker & Son's store, loss \$5000.

Tenn., Sewanee.—Hodgson Memorial Infirmary of University of the South; estimated loss \$25,000.

Tex., Denison.—Fred Braun's slaughterhouse; loss \$2000.

Va., Alberene.—Graded high-school building; loss \$5000. Address The Mayor.

Va., Casanova.—Episcopal rectory; Rev. D. C. Meyer, rector.

W. Va., Follinsbee.—Richard Humes' building; loss \$10,000.

W. Va., Wardensville.—John J. Jordan's store and flour mill; loss \$3000.

W. Va., Pearisburg.—Mrs. Edward C. Hale's residence.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Ensley.—Prudential Realty Co. will erect 20-room apartment-house. (See "Land Developments.")

D. C., Washington.—Lester A. Barr, The Wyoming, will erect apartment-house; eight stories; will have one-story companion entrance to The Wyoming.

Ga., Rome.—A. W. Watters is reported contemplating erection of apartment-house.

Ga., Rome.—Hines M. Smith will probably erect apartment-house.

Ga., Savannah.—Deppish Kirkland will erect two double-story frame apartments; frontage 45x90 feet each; colonial style.

Md., Baltimore.—Gen. Clinton L. Riggs has plans by and will receive sub-bids through Glidden & Friz, Glenn Bldg., Baltimore, for erection of apartment-house at Charles and Read Sts.; nine stories; pressed brick and stone, with marble trimmings; terra-cotta roof; polished oak and mahogany interior; cost about \$150,000. (Previously mentioned.)

Mo., St. Louis.—Elbert Realty Co. will erect store and apartment building on Delmar St. near Skinner Rd.; will contain two stores and apartments.

Mo., St. Louis.—Martin Monti will erect apartment-house at 5972 Page Blvd.; three stories; brick; three apartments; cost \$20,000.

N. C., Durham.—W. C. Bradsher, Box 134, is interested in projected apartment-house to be erected by other parties.

Tex., Houston.—Lamb-McAshan Company has plans by A. C. Pigg, Houston, for apartment-house; eight stories and basement; first two floors finished in red tapestry brick; upper floors in red-tinted gray pressed brick; stone and cement trimmings; reinforced concrete frame.

ASSOCIATION AND FRATERNAL

Ala., Birmingham.—Young Men's Christian Association will receive bids until March 1 for erection of building; nine stories, basement and roof garden; French renaissance style; facades, with pavilion at each corner, lower portions to have three terra-cotta arches; windows above same framed in molded terra-cotta architrave, with terra-cotta keystones in relief; six balustrade panels in each pavilion; basement of granite; first story, balcony and cornice above of terra-cotta; broad surface of this story faced with terra-cotta blocks; body of building above first story faced with tapestry brick; building surmounted by terra-cotta cornice; parapet surmounted with five antique iron standards supporting electric lights; main and boys' entrances treated in terra-cotta and iron, former having verd antique iron marquis, with hanging electric lights, supported on ornamental iron brackets; plans by Harry Wheelock, Birmingham. (Previously noted.)

Ala., Montgomery.—Grand Lodge of Alabama, Knights of Pythias, adopted plans for lodge building; four stories, including basement; brick; stone trimmings; Grecian style; fireproof storerooms; auditorium to seat 800; cost, including grounds, \$75,000; James B. Ellis, chairman of committee, Selma, Ala. (Previously noted.)

Ark., Little Rock.—Al Amin Temple, Ancient Free and Accepted Masons, will erect temple.

Fla., Pensacola.—Benevolent Protective Order of Elks will erect building; two stories; colonial style; cost about \$50,000. (Recently noted.)

Ga., Atlanta.—Young Men's Christian Association is planning erection of \$600,000 building.

Ga., East Point.—Ancient Free and Accepted Masons plan erection of three-story lodge building.

Ga., Vidalia.—Ancient Free and Accepted Masons will erect brick temple.

Ky., Lexington.—Knights of Pythias is having plans prepared by Lyman Walker, Covington, Ky., for girls' dormitory at Pythian Home; will connect with main building by colonnade.

Ky., Okolona, R. Station, Louisville.—Okolona Improvement Co. incorporated with \$5000 capital stock by H. D. Robb, B. T.

W. Va., Tunnelton.—Merchants' Coal Co.'s tippie at Mine No. 1; estimated loss \$25,000.

W. Va., Morgantown.—Morgantown & Kingwood Railroad's machine shop; J. K. Monroe, chief engineer, Kingwood, W. Va.

Glidden, W. F. Gault and others; will erect lodge building.

Miss., Greenville.—Greenville Pythian Castle Hall Association plans erection of five-story building.

Tenn., Maryville.—Knights of Pythias plan erection of lodge building; cost \$9000 to \$10,000.

Tex., Cleburne.—Olive Lodge, No. 31, Knights of Pythias, will erect temple; E. A. Rice, R. J. Harwood, G. B. Kirk and others, building committee.

Tex., Hubbard.—Ancient Free and Accepted Masons will erect brick lodge building.

Tex., Temple.—Benevolent Protective Order of Elks will erect lodge building; three stories; cost \$25,000; T. J. Darling, Father Heckman and F. P. Hamill, committee.

BANK AND OFFICE

D. C., Washington.—O. Owens, 1504 H St. N. W., has plans by Appleton P. Clark, Jr., Equitable Life Bldg., 816 14th St. N. W., Washington, for office and store building; 30x50 feet; fireproof construction; electric lighting; cost \$10,000; bids opened. (Recently noted.)

Fla., Jacksonville.—E. H. Tomlinson, J. G. Boyd of Jacksonville and J. J. Heard of Arcadia, Fla., are having plans prepared by John Kevan Peebles, Norfolk, Va., for 15-story office building previously reported. Architect may be addressed.

Fla., Ocala.—Ocala National Bank will open bids March 7 for erection of bank building; one story; 40x76 feet; stone or brick; heating and lighting not decided; plans by W. B. Camp, Jacksonville, Fla. (Address proposals to John L. Edwards. (Recently noted.)

Fla., Ocala.—Ocala National Bank will open bids March 7 for erection of bank building recently mentioned; one story; 40x76 feet; steam heat; electric lighting; tile and marble work; cost \$25,000; plans by W. B. Camp, Jacksonville, Fla. (See "Machinery Wanted.")

Ga., Macon.—Georgia Life Insurance Co. contemplates erecting six-story annex in rear of present office building; cost about \$50,000.

Fla., Miami.—Board of Trade will erect building; contemplates structure three stories high, 50x100 feet, costing about \$35,000.

La., Shreveport.—Commercial National Bank will open bids February 18 and let contract this month for erection of recently noted bank and office building to cost \$350,000; 10 stories; 80x100 feet; as previously noted, plans by Geo. R. Mann, Little Rock, Ark.; Westlake Construction Co., St. Louis, Mo., figuring on construction. (See "Machinery Wanted.")

Md., Annapolis.—Globe Furniture Co. is having plans prepared by Callis & Callis, 2009 St. Paul St., Baltimore, Md., for office and warehouse building; semi-fireproof construction; 35x100 feet; steam heat; electric lighting; freight and passenger elevator; cost \$10,000.

Miss., Wheeler.—Wheeler Banking Co. will erect bank building; plans not determined.

N. C., Wilmington.—Atlantic Trust & Banking Co., Southern Bldg., Front and Chestnut Sts., purchased site, 40x54 feet, for \$25,000, and will erect bank building; plans not yet made.

Okl., Norman.—First State Bank will erect brick and reinforced concrete bank building; bids for furnishing material and erecting structure will be received at office of Bailey & Bailey, architects, 901 Coleord Bldg., Oklahoma City, Okla., until 10 A. M. March 20; bids are to be addressed to Bailey & Bailey and to be accompanied by certified check, payable to First State Bank, for 5 per cent. of proposal; contractors may secure plans and specifications from architects by depositing \$25.

Tex., Brownsville.—St. Louis, Brownsville & Mexico Railway, E. C. Burgess, engineer maintenance of way and construction, Kingsville, Tex., has plans for office and warehouse building. (See "Warehouses.")

W. Va., Keyser.—First National Bank will remodel building.

W. Va., Welch.—Hudson Bros. will rebuild office and store building recently reported burned. (See "Stores.")

CHURCHES

Ark., Morrilton.—Methodist Church has not selected architect to prepare plans for Sunday-school addition recently noted; 40x60 feet; brick; heating and lighting to be supplied from central plant; cost \$5,000. Address The Pastor.

Fla., West Palm Beach.—Union Congregational Church, J. C. Stowers, chairman of building committee, will expend \$10,000 to erect edifice recently noted; 90 feet square; stone and concrete; lighting and sidewalks to cost \$150; architect is preparing plans.

Ga., Atlanta.—Trinity Methodist Church, Dr. John B. Robins, pastor, contemplates erecting edifice.

La., New Orleans.—Catholic Church purchased site, 320x390 feet, on which to erect church building and school; Rev. Leo Gasser will be in charge.

La., New Orleans.—Italian Mission, Rev. Frank Zito, pastor, Chartres and Esplanade Ave., contemplates erecting edifice.

Md., Baltimore.—Augsburg Evangelical Lutheran Church, Garrison and Bateman Aves., Mont Alto, has plans by J. E. Laferty, 11 E. Pleasant St., Baltimore, for edifice; one story; 70x48 feet; stone; cost about \$25,000; bids received until February 16; Milton C. Davis, 15 E. Fayette St.; Fred Decker, Jr., 1209 E. Biddle St.; E. G. Turner, 2010 Harlem Ave.; A. F. West, 15 E. Fayette St.; John Hiltz & Sons Company, 3 Clay St., and R. W. & E. Minor, 224 W. Pratt St. (all of Baltimore), are bidding.

Md., Chevy Chase.—Church of the Blessed Sacrament will erect edifice after plans by Milburn, Heister & Co., Home Life Bldg., Washington, D. C.

Md., Elkridge.—Grace Protestant Episcopal Church has completed plans by George Worthington, 522 Law Bldg., Baltimore, Md., for edifice; one and a half stories; 42x76 feet; stone; slate roof; concrete foundation; flooring will be hardwood and parquet; mantel and tiling work; cost about \$15,000; contractors estimating include John Cowan, 106 W. Madison St.; Samuel Sprent, 203 N. Pine St.; George A. Blake, 301 Law Bldg., all of Baltimore, Md. (Previously mentioned.)

N. C., Asheville.—Trinity Episcopal Church is having plans prepared by W. H. Lord of Asheville for edifice to cost about \$35,000; old stone foundations will be used.

N. C., Lexington.—First Presbyterian Church will expend \$5,000 to erect Sunday-school addition; one story; 35x45 feet; ordinary construction; hot-air heat; electric lighting; plans by Wheeler & Stern, Charlotte, N. C.; date of opening bids not set; address proposals to G. W. Montcastle. (Recently noted.)

Okla., Oklahoma City.—Immanuel Baptist congregation will erect edifice; manganese gray pressed brick; Carthage stone trimmings; 96x118 feet; two stories; cost \$60,000.

S. C., Greenwood.—South Main Street Baptist congregation will erect edifice. Address The Pastor, South Main Street Baptist Church.

S. C., Yorkville.—Associate Reformed Presbyterian congregation will erect edifice. Address The Pastor, Associate Reformed Presbyterian Church.

Tenn., Knoxville.—First Cumberland Presbyterian Church, Rev. T. Ashburn, pastor, will open bids about April 15 for erection of \$40,000 edifice recently noted; 70x80 feet; mill construction; hot-air heat; electric lighting; plans by R. F. Graf & Sons, Knoxville.

Tex., Belton.—Baptist congregation will enlarge edifice; plans being prepared. Address The Pastor, Baptist Church.

Tex., McKinney.—Pentecostal Nazarene Church will erect tabernacle; Rev. Virgil Koran, Peniel, Tex., is pastor.

Tex., Strawn.—First Baptist congregation will erect edifice; two stories; Masonic hall on second floor. Address The Pastor, First Baptist Church.

Tex., Victoria.—Methodist Church will have plans prepared by Hull & Praeger of Victoria for edifice; buff pressed brick; white enamel brick and terra-cotta; 67x100 feet; dome; height to top of dome, 56 feet; front of five colonial columns and four stained glass windows; main auditorium, 41x47 feet, with seating capacity of 302; elevated floor; Sunday-school auditorium, 32x47 feet; cost \$16,000 to \$18,000.

Va., Portsmouth.—Elm Ave. Methodist Episcopal Church South, Rev. W. G. Bates (pastor) Owens Memorial Methodist Episcopal Church), chairman building committee, will erect temporary building for church and Sunday-school purposes; 30x40 feet; ordinary construction; probably gas radiators; electric lighting; cost \$1,500; later will erect

permanent structure. (See "Machinery Wanted.")

Va., Richmond.—Westhampton Protestant Episcopal Church, C. Hall, 604 Mutual Bldg., chairman building committee, will erect brick edifice recently noted; entire cost \$6,000; seating capacity 250; furnace heat; electric lighting; plans by C. K. Bryant, Richmond; contract not awarded.

W. Va., Bluefield.—Presbyterian church, Rev. Mr. Moore, pastor, will complete edifice at cost of about \$10,000; construction begun.

W. Va., Charleston.—Methodist church will erect edifice. Address The Pastor, Methodist Church.

W. Va., St. Albans.—Methodist church will erect edifice; Rev. George R. Thomas, Vandalia, O., will be in charge.

CITY AND COUNTY

Ala., Gadsden.—Jail.—Etowah county has plans by Southern Structural Steel Co., San Antonio, Tex., for jail; three stories; red pressed brick; 51x56 feet; tower for insane prisoners; interior of steel; second floor will be completed with 64 cells; will not place cells in third story or basement at present; cost \$25,000; will receive bids until February 27. (Recently noted.)

Ark., Van Buren.—Infirmary.—Crawford county awarded contract at \$4500 to John T. Bierlus, Van Buren, for erection of infirmary building; fireproof construction; two stories; brick; 15 rooms; plans by J. T. W. Jennings, Fort Smith, Ark.

Fla., Jacksonville.—Engine-house.—City opened bids for erection of engine-house on Kings Rd.; Florida Contracting Co., Jacksonville, is lowest bidder at \$5500. Address The Mayor. (Previously noted.)

Fla., Key West.—Poorhouse.—Monroe County Commissioners are receiving bids for erection of poorhouse.

Fla., Tampa.—Board of Public Works, D. B. McKay, president, will receive bids until February 21 for erection of pavilion in Highland Park; plans and specifications at office of Bonfoey & Elliott, Curry Bldg., Tampa.

Ga., Washington.—Jail.—Wilkes County Commissioners will open bids about April 1 for erection of jail and jailer's residence; three stories; fireproof concrete construction; tile roof; steam heat; electric lighting; cost \$20,000; plans by G. Lloyd Preacher, Augusta, Ga. (Recently noted.)

Ky., Shelbyville.—City Hall, etc.—City will erect combination city hall, fire department and police headquarters building. Address The Mayor.

Md., Baltimore.—Vault.—City opened bids for erection of vault in city hall annex; fireproof; two stories; electric lights; iron and concrete; J. J. Walsh, 1533 Maryland Ave., Baltimore, is lowest bidder at \$3395.

Md., Baltimore.—Market.—Board of Awards is receiving estimates for enclosing porticoes of retail market; those estimating are Wm. A. Parr, 602 Law Bldg.; Charles L. Stockhausen, Marine Bank Bldg.; R. B. Mason, 210 E. Lexington St.; P. J. Cushen, 213 Courtland St., all of Baltimore.

Md., Cumberland.—City Hall.—City opened bids for city hall; Henry Brown of Philadelphia, Pa., is lowest bidder for construction at \$84,498. (Recently noted.)

Md., Frederick.—Hospital.—City has plans by A. B. Mullett & Co., Union Trust Bldg., Washington, D. C., for heating plant, laundry and water supply; will erect brick and stone building; two stories; 38x50 feet; Painter & Posey, 324 N. Charles St., Baltimore, Md., engineers in charge.

Miss., Ellisville.—Jones county voted \$10,000 bond issue to erect county high-school building. Address County Commissioners. (Recently noted.)

S. C., Greenville.—Hospital.—City has purchased \$20,000 sanitarium for city hospital; will make improvements. Address The Mayor.

Tex., Brownsville.—City Hall and Market.—City will vote March 14 on \$12,000 to repair city hall and market place. Address The Mayor.

Tex., Paris.—Comfort Station.—City will have plans drawn for public comfort station recently noted; brick and stone, with tile floors and standard plumbing; cost within \$8000; Ed. H. McCulston, Mayor.

Va., Lynchburg.—Hospital.—Board of Aldermen authorized erection of city hospital; cost \$30,000; also erect \$7500 ward for tuberculosis patients; Harry L. Shaner, City Engineer. (Previously noted.)

COURTHOUSES

Ark., Little Rock.—Pulaski County Commissioners are having plans prepared by Geo.

R. Mann, Little Rock, for \$200,000 worth of improvements to courthouse; cost of complete structure, \$300,000; size 140x150 feet; hotblast heat; electric lighting; bids probably opened in October.

Ark., Prescott.—Nevada County Commissioners have plans by Theo. M. Sanders, Little Rock, for \$50,000 courthouse. (Recently noted.)

Ark., Prescott.—Nevada county, J. A. Bailey, clerk, will open bids about March 15 for erection of courthouse recently noted; fireproof; brick and stone; two story; 70x105 feet; gas heating; electric lighting; cost \$50,000; plans by Theodore Saunders, Little Rock, Ark.; C. C. Hamby, secretary commissioners, can be addressed.

Ky., Harrodsburg.—Louis I. Walker, City Judge of Mercer county, proposes voting on \$40,000 bond issue to erect courthouse. (Recently noted.)

N. C., Tarboro.—Edgecombe County Commissioners plan expending \$20,000 to remodel courthouse.

Okla., Hugo.—Choctaw county will probably vote in May on \$125,000 bond issue for courthouse and jail. Address County Commissioners.

Tex., Stiles.—Reagan County Commissioners awarded contract to William Martin, Comanche, Tex., for erection of courthouse; 50x50 feet; four doors; fireproof office for clerk; cost \$20,000.

Va., Chester.—Chesterfield County Commissioners, Chesterfield, Va., are considering erection of courthouse to replace present structure at Chesterfield.

W. Va., Moorefield.—Plans for Hardy County Courthouse will be ready in about six weeks; Milburn, Heister & Co., Home Life Bldg., Washington, D. C., architects. Address County Commissioners. (Recently noted.)

DWELLINGS

Ala., Bay Minette.—Frank B. Wilhart will erect concrete residence.

Ala., Birmingham.—I. E. Hood, president of I. E. Hood Lumber Co., will erect residence.

Ala., Birmingham.—Mrs. Flora Klotzer will erect residence.

Ala., Ensley.—Prudential Realty Co. will erect dwellings on Park Ave. (See "Land Development.")

D. C., Washington.—Jos. M. Carmody, 338 G St. N. E., will erect six semi-detached dwellings at 20th St. and Oak Rd.; three stories; nine rooms and two baths; cost \$9000 to \$10,000 each.

D. C., Washington.—J. R. Haislip, 2120 1st St. N. W., has plans by A. H. Beers, 1342 New York Ave. N. W., Washington, for two two-story frame dwellings at 1233-37 Crittenden St. N. W.; cost \$6500; construction by owner.

D. C., Washington.—T. L. Lewis, 1805 2d St. N. W., will erect 20 six-room dwellings at Hall Pl. and W St. N. W.; frontage 20 feet; cost \$100,000.

Ga., Hawkinsville.—H. F. Lawson will erect \$3500 dwelling.

Ky., Georgetown.—Mrs. A. K. Hawkins will erect brick bungalow.

Ky., Earlinton.—Tappan & Gardiner will erect stone and dwelling.

Ky., Louisville.—Walter E. Hillerich, architect, is preparing plans for rooming-house on Chestnut St.; four stories; fireproof; 38 rooms; cost \$20,000.

Ky., Nortonville.—Nortonville Coal & Coke Co. will erect 50 dwellings. (See "Land Developments.")

La., New Orleans.—Savings Homestead Association will erect double frame cottage; cost \$4500.

La., New Orleans.—German-American Homestead Association will erect single cottage; cost \$3500.

Md., Baltimore.—J. E. M. Raley, 218 E. Lexington St., is having plans prepared by Glidden & Friz, Glenn Bldg., Baltimore, for residence at Ten Hills; frame and stucco; two and a half stories; cost \$7500.

Md., Baltimore.—Frank Novak, 2808 Jefferson St., is having plans prepared by Joseph Hirt, 2707 E. Jefferson St., Baltimore, for 18 dwellings on Rose St., between Ashland Ave. and Madison St.; two stories; brick; concrete yards, cellars and walks; iron-spot brick fronts; marble basins; cost \$25,000; construction by owner.

Md., Baltimore.—Geo. R. Morris, 46 Gunther Bldg., will erect residence on Dorchester Rd., near Cleveland Ave.; two and a half stories; frame; slate roof; hot-water heat; electric lights; cost \$6000; plans and construction by owner.

Md., Baltimore.—Eugene Biscoe is receiving bids through J. J. Carmody, agent, 435 Equitable Bldg., for 10 dwellings on Woodlawn Ave.; two stories; brick; 13x42 feet; cost \$15,000; plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore; contractors estimating are Charles Gerwig, Fidelity Bldg.; J. C. Morgan, Union Trust Bldg., both of Baltimore. (Recently noted.)

Md., Baltimore.—M. Fillmore Carter, 1312 Small St., is reported as having plans prepared by Stanislaus Russell, 2900 Clifton Ave., Baltimore, for 16 dwellings; semi-detached; brick; porch fronts; marble trimmings; eight rooms and bath; steam heat; electric lights; cost \$70,000.

Md., Baltimore.—E. J. Gallagher Realty Co., 625 N. Rose St., will erect 29 dwellings on Lakewood Ave. and Canton St.; two stories; brick; 15x45 feet; electric lights; hot-water heat; cost \$35,000; plans and construction by owner.

Md., Baltimore.—Walter M. Hampson, 107 St. Paul St., will erect 14 dwellings on Huntingdon Ave.; two stories; brick; iron-spot brick; white-marble basins and steps; 14x42 feet.

Md., Baltimore.—Henry J. Tinley, 314 N. Charles St., Baltimore, is preparing plans for ornamental frame cottage at Main and Oakfield Aves.; two and a half stories; concrete foundation; slag roof; cost \$5000.

Md., Baltimore.—Louis Pincus has plans by F. E. Beall, 213 St. Paul St., Baltimore, for 10 dwellings on Grason & Ellamont Sts., Walbrook; 14x18 feet; hot-air heat; gas and electric lighting; cost \$1700 each; construction by owner.

Md., Baltimore.—Berman Realty Co., 231 Courtland St., is having plans prepared by Callis & Callis, 2000 St. Paul St., Baltimore, for 12 cottages at Sudbrook Park; two and a half stories; frame; hardwood finishings; cost \$72,000. (Previously noted.)

Md., Baltimore.—John Welsh, 2224 W. Saratoga St., is having plans prepared by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for 17 dwellings on Old Frederick Rd.; 14x43 feet; hot-air heat; electric lights; brick construction. (Recently noted.)

Md., Baltimore.—Walter Westphal, 1700 N. Bond St., purchased 400 feet of land on Wilkens Ave. and will erect number of two-story dwellings.

Md., Chevy Chase.—Irvin O. Bull, 14th and K Sts. N. W., Washington, D. C., is having plans prepared by A. P. Clark, Jr., Equitable Bldg., Washington, for residence; two and a half stories; frame; shingle exterior; hardwood finish; hot-water heat; cost \$10,000.

Md., Queen Anne.—W. H. Woofers is having plans prepared by Henry J. Tinley, 311 N. Charles St., Baltimore, Md., for residence; frame; two and a half stories; 28x32 feet; cost \$5000.

Md., Frederick.—Mrs. Wm. J. Worman will erect residence.

Md., Roland Park.—Edmund S. Dickey, The Walbert, Baltimore, Md., will have plans prepared by Howard Hill, 11 Pleasant St., Baltimore, for residence on Somerset Rd.

Md., Roland Park.—Charles H. Dickey, president of Maryland Meter Co., Holliday and Saratoga Sts., Baltimore, Md., will have plans prepared by Howard Hill, 11 E. Pleasant St., Baltimore, for residence on Somerset Rd.

Md., Roland Park.—Geo. W. Eisenhauer of Eisenhauer, McLea & Co., Duker and Central Aves., is having plans prepared by U. M. Anderson, 224 N. Charles St., Baltimore, for residence at Roland Ave. and Elmhurst Rd.; two and a half stories; ornamental stone and frame; verandas supported by columns on two sides; hot-water heat; electric lights; cost \$12,000.

Miss., Gulfport.—John Enslin of Gulfport Tea & Coffee Co. will erect two-story bungalow; 8 to 10 rooms.

Mo., Jasper.—C. H. Geck of Carthage will erect dwelling near Jasper.

Mo., Kansas City.—B. B. Joffe, manager of B. B. Joffe Investment Co. will erect 120 stone dwellings; cost \$3000 each.

Mo., Kansas City.—P. J. Morley will erect residence; three stories; colonial brick and white sand mortar; tile roof; 14 rooms; cost \$20,000.

S. C., Bamberg.—J. H. Hutto will erect residence; two stories.

N. C., Charlotte.—C. A. Dixon will erect residence.

S. C., Gaffney.—J. C. Ratloff will erect residence.

S. C., Gaffney.—T. B. Butler will erect residence.

N. C., High Point.—George Penny will erect \$10,000 residence, construct lake and macadam driveway, etc.

N. C., Wilmington.—Martin Schnibben has plans by Grossmann-Mahler Architectural & Construction Co., Wilmington, for \$4000 dwelling.

N. C., Wilmington.—Henry Walters is having plans prepared by Milburn, Heister & Co., Home Life Bldg., Washington, D. C., for dwelling; proposals may be addressed to Thomas H. Wright, Wilmington.

Okla., Oklahoma City.—F. M. Tull will erect residence and garage; pressed brick; sandstone trimmings; two stories and basement; cost \$40,000.

Okla., Oklahoma City.—S. M. Gloyd has plans by William A. Wells, Oklahoma City, for residence; two stories and basement; 15 rooms; cost \$20,000.

S. C., Charleston.—Robert H. Pinckney will erect dwelling; two and a half stories; 31x54 feet; ordinary construction; gas and electric lighting; cost \$4000; plans and construction by owner. (Recently noted.)

Tenn., Chattanooga.—C. S. Stewart is having plans prepared by J. R. Ryan & Sons, Georgia Ave., Chattanooga, for dwelling; cost \$8000.

Tenn., Chattanooga.—Mrs. E. G. Richmond, 501 Vine St., is having plans prepared by J. R. Ryan & Sons, Chattanooga, for dwelling in Fort Woods addition.

Tenn., Isabella.—C. W. Renwick will expend \$10,000 to erect 50x60-foot dwelling; ordinary construction; steam heat; electric lighting; cement sidewalks; plans by Bauman Bros., Knoxville, Tenn.; bids opened February 15; address architects. (Recently noted.)

Tenn., Knoxville.—Oliver King will erect several residences for employes. (See "Miscellaneous Enterprises.")

Tenn., Knoxville.—Hugh Burke has plans by Wm. H. Gildard, Knoxville, for residence; pressed brick; marble trimmings; colonial porch front; cost \$3000.

Tenn., Nashville.—W. B. Herbert will erect \$1000 brick residence.

Tenn., Nashville.—Geo. B. Graves, Red-bolling Springs, Tenn., will erect residence; Bowling Green stone.

Tex., Dallas.—George Sargent will erect \$4000 residence.

Tex., Galveston.—G. J. Jorgensen will erect residence; cost \$7000.

Tex., Greenville.—A. L. Murphy is having plans prepared for bungalow; six rooms and bath; cost \$2500.

Tex., Greenville.—Bert Beall is having plans prepared for residence; two stories; five rooms and bath; cost \$3000.

Tex., Madisonville.—W. A. Yarbrough will erect one-story brick residence.

Tex., Palacios.—W. E. Pratt will erect \$15,000 dwelling.

Tex., Yorktown.—J. L. Bool will erect residence.

Tex., Yorktown.—Henry Randow will erect residence.

Tex., Waxahachie.—W. M. Tidwell has plans by W. Edwards, Waxahachie, for one-story dwelling; five rooms; bids opened. (Recently noted.)

Va., Afton.—James H. Dooley, Richmond, Va., will erect residence.

Va., Clifton Forge.—George M. Farrar will open bids about March 15 for erection of 18-room dwelling; red brick and brick veneer; Kentucky bluestone trimmings; slate roof; hot-water heat; conduit wiring; cost \$12,000; plans by H. C. Allen, Hot Springs, Va.; address proposals to architect. (Recently noted.)

Va., Fredericksburg.—Board of trustees of State Normal and Industrial School for Women will receive bids until February 20 for material and erection of residence; certified check for \$200, payable to P. J. White, chairman of building and grounds committee; plans and specifications at office of Charles M. Robinson, architect, Richmond, and E. H. Russell, president, Fredericksburg.

Va., Norfolk.—I. C. Roberts will erect four brick dwellings; cost \$4800; construction by owner.

Va., Petersburg.—Mrs. J. T. D'Alton will erect four dwellings; eight rooms each.

Va., Petersburg.—James E. Cuthbert will erect 16-room dwelling.

Va., Richmond.—Henry S. Wallerstein will erect three-story brick store and dwelling; cost \$4000.

Va., Richmond.—Mrs. Mary Held will erect residence; two and a half stories; brick.

Va., Richmond.—W. J. Gilman will erect two two-story tenements (four dwellings) and detached two-story dwelling; brick construction; cost \$14,500.

Va., Richmond.—Henry S. Wallerstein will

erect three-story brick store and dwelling; cost \$4000.

Va., Richmond.—W. F. Drinkard, Jr., will erect two-story brick tenement-house (two dwellings); cost \$10,000.

Va., Salem.—L. O. Brightbill is reported to erect residence.

W. Va., Fayetteville.—Mrs. M. E. Gaines has plans by David Dick, Charleston, W. Va., for dwelling; native stone.

W. Va., Pearisburg.—J. J. Hale will erect residence to replace structure reported burned.

GOVERNMENT AND STATE

N. C., Raleigh.—Buildings.—Directors State Hospital have asked for appropriation of \$72,000 to erect building for female patients, \$3800 to build greenhouse, \$4600 to construct electric-light plant, \$1200 to equip machine shop, \$2500 to build covered walkway connecting buildings, \$2500 to purchase pipes to drain driveways, etc.; total appropriation of \$183,750 is asked for this year and same amount for 1912.

Tex., Fort Crockett.—Shed.—M. C. Bowden of Galveston, Tex., is lowest bidder at \$514 for erection of reinforced-concrete wagon shed; Capt. P. Whitworth, constructing quartermaster in charge.

Va., Portsmouth.—R. H. Richardson & Son, Hampton, Va., have contract at \$42,373 for building new roof and runway for building No. 23 at Norfolk Navy-yard.

Va., Petersburg.—Hospital.—Central State Hospital will erect building for criminal insane to cost about \$7000; bids are invited.

HOTELS

Ala., Bay Minette.—Dr. J. C. Campbell will make improvements to hotel; to include veneering structure with concrete blocks, 8x8x16 inches and reroofing with galvanized steel.

Ala., Troy.—Troy Realty Co. is planning erection of hotel.

Fla., Santa Rosa County.—C. A. Russell of Cleveland, O., will erect hotel. (See "Land Developments.")

Ga., Lithia Springs.—Bowden Lithia Water Co., Sam Peggam, manager, will expend \$30,000 for improvements, providing accommodations for 300 guests.

Ky., Dawson Springs.—James E. Wilhelm and associates leased Arcadia Hotel property and plan erection of \$25,000 hotel and other improvements.

Ky., Louisville.—Sam P. Jones, president of Commercial Bank & Trust Co., and James E. Gamble are reported as contemplating erection of hotel; not less than 12 stories; 250 rooms; 106x105 feet; cost \$750,000.

Ky., Nortonville.—Nortonville Coal & Coke Co. will erect hotel. (See "Land Developments.")

Ky., Paducah.—Wilhelm Hotel Co. incorporated with \$5500 capital stock by James Wilhelm, E. B. Wilhelm and William Wilhelm.

La., New Orleans.—Monteleone Hotel Co. is having plans prepared by Tolodano & Wogan, New Orleans, for roof garden on Hotel Monteleone; portable glass roof; patent roof garden heating system; cost \$75,000.

La., New Orleans.—Hotel De Soto, E. Perin, managing director, is planning erection of addition; size of present structure.

N. C., Raleigh.—Jones & Bailey are reported to erect hotel to be leased by R. H. Ricks, proprietor of Ricks Hotel, Rocky Mount, N. C.; 55x105 feet; five stories; 60 bedrooms; 21 private baths; white pressed brick; lobby floor of marble tiling.

N. C., Shelby.—J. H. McAden and others of Charlotte, N. C., are reported as planning erection of hotel, etc. (See "Land Developments.")

N. C., Wilmington.—Oceanic Hotel Co., Wrightsville Beach, is having plans prepared by Grossmann-Mahler Architectural & Construction Co., Wilmington, for three-story tower and other improvements to hotel.

Okla., Oklahoma City.—J. W. Gillespie and A. P. Crockett will erect hotel; three stories; brick; cost \$30,000.

Okla., Oklahoma City.—W. B. Skirvin will erect hotel; 10 stories and roof garden; 225 rooms; reinforced concrete on steel frame; gray pressed brick and Bedford stone; Algolite stone trimmings; cost \$400,000.

Okla., Tulsa.—W. S. Wright of Broken Arrow, Okla., will erect hotel for negroes; two stories; brick; buff faced brick facing; cost \$30,000.

Tenn., Chattanooga.—Lookout Mountain Improvement Co. incorporated with \$200,000 capital stock; T. T. Wilson, president; M. S. Gibson, secretary; will erect hotel on Look-

out Mountain, to be known as New Inn. (Recently noted.)

Tex., Houston.—J. J. Sweeney will open bids March 15 for erection of hotel and business building; two stories; 85x125 feet; ordinary brick construction; cost \$25,000; plans by O. J. Lorehn, 421 Temple Bldg., Houston. (Recently noted under "Apartments.")

Tex., Mineola.—M. A. Bailey will erect \$40,000 brick hotel.

Va., New Castle.—Mrs. J. P. Caldwell, T. H. Howerton and B. R. Caldwell purchased Bel Air Hotel and are reported to make improvements.

Va., Winchester.—J. G. McCrorey of New York purchased Taylor Hotel and will make improvements.

MISCELLANEOUS

Ala., Birmingham.—Clubhouse.—Edgewood County Club has plans by Miller & Martin, Title Guarantee Bldg., Birmingham, for \$15,000 clubhouse recently noted. Address architects.

Ark., Helena.—Parish-house.—St. John's Episcopal congregation will erect parish-house. Address The Pastor, St. John's Episcopal Church.

D. C., Washington.—Grandstand.—T. C. Noyes, president, National Ball Park, is having plans prepared by Milburn, Heister & Co., Home Life Bldg., Washington, for new bleachers and remodeling grandstand.

D. C., Washington.—Buildings.—Little Sisters of the Poor awarded contract to C. J. Cassidy & Co., 523 13th St. N. W., Washington, for additions and alterations to buildings; plans by Milburn, Heister & Co., Home Life Bldg., Washington.

D. C., Washington.—Clubhouse.—University Club, 930 16th St. N. W., has revised plans for proposed eight-story clubhouse to cost about \$350,000.

Fla., St. Petersburg.—Clubhouse.—St. Petersburg Yacht Club contemplates erecting clubhouse.

Fla., Tampa.—Car Barns, etc.—Tampa Electric Co. has plans by Stone & Webster Engineering Corporation, Boston, Mass., for car barns and shops recently noted; brick; mill construction; to cover 69,000 square feet of space; cost \$150,000.

Ga., Americus.—Hospital.—Americus Hospital Association will erect hospital to cost \$25,000.

Ga., Dalton.—Clubhouse.—Lesche Club contemplates erecting clubhouse.

Ga., Macon.—Dr. W. G. Lee will erect store and garage. (See "Stores.")

La., New Orleans.—Market.—Mrs. O. W. Chamberlain and Mrs. Gordon Sargent will erect market.

Mo., Columbia.—Stadium.—University of Missouri has not completed plans for erection of stadium recently noted; seating capacity, 10,000 to 15,000. Address Prof. C. L. Brewer.

N. C., Winston-Salem.—Grandstand.—W. C. Northrup of Winston-Salem has completed plans for grandstand for new baseball park to seat 550 to 600 persons.

Okla., Tulsa.—Stadium.—Tulsa Athletic Club, H. C. Pouder, manager, will erect stadium with seating capacity of 15,000.

S. C., Columbia.—Clubhouse.—City Federation of Women's Clubs, Mrs. W. B. Burney, president, purchased site, 81x114 feet, and will have plans prepared by W. A. Edwards of Edwards & Walter, Atlanta, Ga., for clubhouse.

S. C., Summerville.—Library.—Timrod Library Circle has plan for library.

Tenn., Linden.—Natorium.—Linden Natorium Co. incorporated with \$10,000 capital stock by W. W. Johnson, J. F. Read, C. C. Gillespie, M. S. McGhee and J. H. J. Livingston, Jr.

Tenn., Memphis.—Hospital.—Hospital trustees of Methodist Church contemplate erecting hospital to cost \$250,000; John H. Sherard, president board of trustees.

Tex., Dallas.—Business.—W. E. Easterwood will erect two-story brick business block to cost about \$10,000.

Tex., Webster.—Clubhouse.—Houston Orchards Co. will erect clubhouse on Clear Lake; office in Chronicle Annex, Houston, Tex.

Va., Norfolk.—Cemetery Building.—Arnold Elberhard of Norfolk prepared plans and specifications for walkhouse to be erected in Forest Lawn Cemetery; bids opened February 15.

Va., Richmond.—Car Barns.—Richmond & Henrico Railway Co., C. Sims Bailey, general superintendent, will receive bids until noon February 18 for erection of car barn according to specifications and drawings

that may be obtained from office of company, 2-4 Ebel Bldg., Richmond, upon deposit of \$5; bids to be made upon blank forms furnished by superintendent; certified check for \$250 to accompany each bid. (Recently mentioned.)

W. Va., Parkersburg.—Clubhouse.—Germania Society, F. Stahlman, president, contemplates erecting clubhouse.

RAILWAY STATIONS

La., Corbin.—Yazoo & Mississippi Valley Railroad, S. S. Morris, general superintendent, Memphis, Tenn., has plans and specifications for depot.

S. C., Conway.—St. Louis, Iron Mountain & Southern Railway, M. L. Byers, chief engineer maintenance of way, St. Louis, Mo., will, it is reported, erect freight depot and brick passenger station.

S. C., Greenville.—Greenville & Knoxville Railroad, W. H. Patterson, president, will soon begin construction of passenger station previously reported.

Tex., Port Arthur.—Southern Pacific Railroad (Texas & New Orleans branch, H. T. Jones, bridge engineer, Houston, Tex.) will erect \$12,000 passenger station recently noted; semi-fireproof construction; bids closed; materials and equipment supplied.

SCHOOLS

Ala., Florence.—City voted \$15,000 bond issue to erect dormitory at State Normal College; it is planned to expend not less than \$45,000 for improvements. Address The Mayor.

Ala., Florence.—Burrell Normal School, George W. White, principal, is not ready to announce plans for erection of dormitory recently noted.

Ark., Bauxite.—American Bauxite Co. will use company's force to erect school building recently noted; fireproof construction; steam heat; electric lighting; cost \$6000.

D. C., Ivy City (not a postoffice).—School Commissioners (C. H. Randolph, John A. Johnston and William V. Judson, members), Washington, D. C., have \$13,000 available for erection of Cruminal school building No. 167; six rooms; brick; to be completed in seven months; bids opened February 16. (Recently noted.)

D. C., Washington.—Board of Education has plans by Snowden Ashford, 1719 Riggs Pl. N. W., for Normal School building on Harvard St. near 11th St. N. W.; two stories; 30 classrooms, assembly hall to seat 400, offices, study hall and library; frontage 300 feet; cost \$257,000. (Previously noted.)

Fla., Delray.—Delray Tax School District No. 6 of Palm Beach county voted \$10,000 bond issue to erect school; Herbert A. Penneck, chairman of Board. (Recently noted.)

Ga., Atlanta.—Francis P. Smith, architect, advises that bids will be opened February 18 for erection of previously-noted building for Georgia School of Technology; to contain shops, classrooms, etc.; three stories; 130x170 feet; fireproof construction; heating not decided; electric lighting; cost \$50,000; King & Walker, associate architects, Atlanta.

Ga., Barnesville.—City plans issuance of \$45,000 bond issue for improvements to Gordon College for land, dormitories and \$30,000 school building.

Ky., Newcastle.—Newcastle School District will erect seven-room school building; 25x32 feet; brick and stone; steam heat; cost within \$14,000; architect not selected. Address District School Trustees. (Recently noted to vote \$15,000 bond issue.)

La., Jena.—Jena High School District, J. D. Manchester, chairman, plans erection of \$40,000 school.

La., New Orleans.—Catholic congregation will erect school and church; Rev. Leo Gassier will be in charge. (See "Churches.")

La., Labadieville.—High School Trustees plan to erect brick school; cost \$15,000.

La., Slidell.—Town voted \$20,000 bond issue to erect school. Address Town Council. (Recently noted.)

Md., Baltimore.—Board of Awards, J. Barry Mahool, president, City Hall, will receive estimates until February 23 for erection of Polytechnic Institute building on North Ave. between Guilford Ave. and Calvert St.; brick and stone; three stories and basement; one wing 71x162 feet, another 71x100 feet, and two 15x60 feet; plans by Baldwin & Pennington, Professional Bldg., Baltimore; Henry Adams, Calvert Bldg., Baltimore, engineer. Contractors estimating are D. J. Phipps, Newport News, Va.; M. C. Davis, 15 E. Fayette St.; G. W. Tovell, Eutaw and Dolphin Sts.; R. B. Mason, 210 E. Lexington St.; John Cowan, 106 W. Madison St.; Charles L.

Stockhausen, Marine Bank Bldg.; B. F. Bennett Building Co., 123 S. Howard St.; Henry S. Ripple, 7 Clay St.; Noel Construction Co., Calvert and German Sts.; D. M. Andrews Company, Mt. Vernon Ave. and 26th St.; Henry Miller, 108 Dover St.; David Peoples, Knickerbocker Bldg.; Peters & Harding, 15 E. Fayette St.; John Hiltz & Son, 3 Clay St.; Fidelity Construction Co., Knickerbocker Bldg., all of Baltimore. (Recently mentioned.)

Miss., Ellisville.—City voted February 4 on \$10,000 bond issue for erection of agricultural high school; plans not made. Address The Mayor. (Previously noted.)

Md., Frederick.—Warren P. Laird, University of Pennsylvania, Philadelphia, Pa., advises that competitive plans for Frederick's proposed \$55,000 boys' high school (recently noted to be received March 18) will not be received generally, but only from architects invited to the competition, as stated on circular obtainable from the adviser, Professor Laird. (Building recently described.)

Miss., Hattiesburg.—City will probably issue \$20,000 of bonds for school improvements. Address The Mayor.

Mo., St. Louis.—Board of Education will have plans and specifications ready for bids by latter part of May for erection of Bryan Hill school previously mentioned; H. C. Toensfeldt, Commissioner of School Buildings.

Mo., St. Louis.—Committee on school buildings of Board of Education rejected all bids for erection of proposed Simmons school building on St. Louis Ave.; is having plans revised; estimated cost \$35,000. Address The Mayor.

N. C., Redwood.—Durham County Board of Education will erect \$3000 school to replace burned structure.

S. C., Columbia.—Winthrop College plans erection of art and science building; cost \$20,000.

Tenn., Chattanooga.—Hamilton County Industrial School Trustees are considering either erection of large building or group of smaller structures; have tentative plans by Charles Bearden, Chattanooga; \$22,500 available.

Tenn., Spring City.—High school and grammar school boards plan erection of annex to high-school building.

Tenn., Tullahoma.—University of Middle Tennessee will, it is reported, erect \$10,000 dormitory and swimming pool.

Tex., Clarendon.—Clarendon College has plans by S. Ray, Amarillo, Tex., for dormitory; 120x100 feet; steam heat; electric lighting; cost \$30,000. (Recently noted.)

Tex., Conroe.—School district, J. L. Hicks, secretary of School Board, has plans by Taylor & Wolfe, Continental Bank Bldg., Fort Worth, Tex., for two-story school building; 10 classrooms and auditorium; 78x107 feet; ordinary construction; heating not decided; electric lighting; cost \$17,000; will advertise for bids. (\$25,000 bond issue previously noted.)

Tex., Dallas.—Board of Education has plans by William F. Nicol, Dallas, for six-room addition to school building recently noted; heating and lighting not determined; cost \$20,000; bids opened.

Tex., Greenville.—City will expend \$70,000 to erect high-school building; two stories and basement; brick and cement; plans by Lang & Witchell, Wilson Bldg., Dallas, Tex.; bids opened February 15. Address proposals to W. A. Frazer, City Clerk. (Recently noted.)

Tex., Madisonville.—City will vote in February on \$18,000 bond issue for erection of brick school building. Address The Mayor.

Tex., Paris.—E. H. McCuiston, Mayor, advises that school improvements (recently noted) will include only small wooden structures; no material needed.

Tex., Port Neches.—Port Neches School Precinct No. 7 voted \$20,000 bond issue to erect brick school. Address Precinct School Trustees.

Tex., Waxahachie.—City will vote March 11 on \$15,000 bond issue to erect ward schools. Address The Mayor.

Va., Chatham.—Town Council will issue \$3000 worth of bonds to enlarge school.

Va., Clifton Forge.—Board of Education will open bids about April 1 for erection of high-school building; 72x74 feet; nine rooms; brick and stone; indirect gravity system of heating; conduit wiring; cost \$16,000; plans by H. C. Allen, Hot Springs, Va. Address architect. (Recently noted.)

Va., Graham.—City will vote on \$20,000 bond issue for school improvements; V. L. Sexton, Mayor.

Va., Charlottesville.—University of Vir-

ginia has plans by Warren H. Manning for amphitheater; Greek design; bandstand in center; cost not decided.

Va., Lynchburg.—Randolph-Macon Woman's College is reported as planning erection of dormitory.

Va., Lexington.—Washington and Lee College has plans by P. C. Flournoy, 1129 14th St. N. W., Washington, D. C., for dining hall; one story, basement and attic; 30x88 feet; ordinary construction.

Va., Lynchburg.—Common Council plans erection of auditorium and gymnasium for new high-school building; Harry L. Shaner, City Engineer.

Va., Manchester.—Manchester School District Trustees will erect high-school building; 14 rooms.

Va., Richmond.—Richmond College is having plans prepared for college buildings at Westhampton.

STORES

Ark., Helena.—Jacob Fink will erect five store buildings.

Ark., Harrison.—Cantrell & Magness have not selected architect to prepare plans for business building recently noted; 60x150 feet. (See "Machinery Wanted.")

Ark., Lake Village.—Harry E. Cook has plans by F. W. Gibb & Co., Little Rock, Ark., for store building; 75x72 feet; fireproof construction; pressed brick; plate glass and marble front; concrete floors; tile entrance; concrete sidewalks; cost \$7000; bids opened. (Recently noted.)

D. C., Washington.—O. Owen, 1504 H St. N. W., has plans by A. P. Clark, Jr., Equitable Life Bldg., Washington, for store and office building; cost \$10,000. (See "Bank and Office Buildings.")

Fla., Inverness.—J. B. Smith of St. Petersburg, Fla., will erect business building; brick; 70x35 feet; four stories.

Ga., Doerun.—J. N. Tison will erect store building; white silica brick; plate-glass front.

Ga., Doerun.—W. M. Smith will erect store building; white silica brick; plate-glass fronts.

Ga., Macon.—Dr. W. G. Lee will open bids in 60 days for erection of two buildings recently noted; store and garage; 52½x133 feet; brick; electric lighting; cost within \$10,000; elevator not decided; plans by C. B. Ellis, Macon.

Ga., Senola.—Mrs. Alice Fall, G. E. Mayfield and W. J. Horton will erect business building; brick; 30x100 feet; two stories; plate-glass front.

Ky., Earlington.—Tappan & Gardiner will erect store and dwelling; two stories; brick; steam heat; electric lights.

La., New Orleans.—Uniola Real Estate Co. is reported as planning erection of business building at Baronne and Poydras Sts.; site 28x109 feet.

Miss., Boyle.—N. E. Pitre will rebuild store building recently reported burned; four stories; 23x90 feet; brick; reinforced concrete; metal roof and ceiling; cost \$8000. (See "Machinery Wanted.")

Miss., Meridian.—C. P. Renfro will erect business building; two stories.

Miss., Natchez.—V. H. Sharpe will erect business building; two stories; brick.

Mo., St. Louis.—Elbert Realty Co. will erect store and apartment building. (See "Apartment-Houses.")

Mo., St. Louis.—Barnes Hospital Association will erect business building to be occupied by William Schotten Coffee & Spice Co.; seven stories; 112x132 feet; cost \$200,000.

N. C., Elizabeth City.—E. F. Aydtlett has plans by Grossmann-Mahler Architectural & Construction Co., Wilmington, N. C., for three-story department store; pressed-brick front, with limestone trimmings. (Previously noted.)

N. C., Lexington.—Jule C. Smith will erect two stores; brick; two stories; 22x80 and 27x100 feet.

N. C., Lexington.—W. F. Curry will erect brick store building; 22x80 feet.

N. C., Shelby.—A. P. Weathers and C. T. Hard have plans by J. M. McMichael, Charlotte, N. C., for \$9500 three-story business building to be occupied by Farmers' Hardware Co.; 50x90 feet; mill construction; stoves; elevator; will open bids at once; address proposals to J. W. Branton. (See "Machinery Wanted.")

Okla., Muskogee.—Mooney Bros. will erect store building; two stories; brick; frontage 25 feet.

Tenn., Chattanooga.—Ferguson Bros. are having plans prepared for store corner Market and 5th Sts.

Tex., Dallas.—Duke & Ayers will erect business building.

Tex., Dallas.—W. M. Alexander will erect one-story brick building; cost \$5000.

Tex., Dallas.—A. D. Clark will erect two-story brick building; cost \$6000.

Tex., Paris.—G. C. Hurst will erect brick business building.

Tex., Yorktown.—J. W. Hoff will erect store building; 30x30 feet.

Tex., Houston.—J. J. Sweeney will erect store and hotel building; cost \$25,000. (See "Hotels.")

Va., Richmond.—Henry S. Wallerstein will erect three-story brick store and dwelling; cost \$4000.

W. Va., Bluefield.—W. P. Hawley has plans by Pedigo & Garry, Bluefield, W. Va., for store building; 50x80 feet; ordinary construction; steam heat; electric lighting; cost \$2500; day later; construction begun.

W. Va., Welch.—Hudson Bros. has plans by Pedigo & Garry, Bluefield, W. Va., for rebuilding store and office structure recently reported burned; 59x105 feet; ordinary construction; steam heat; electric lighting; sidewalks; prism lights; cost \$18,500; date of opening bids not set.

W. Va., Welch.—Strother, Taylor & Taylor will receive bids about February 25 through Pedigo & Garry, Bluefield, W. Va., for rebuilding of burned business building recently noted; 30x30 feet; ordinary construction; hot-air heat; electric lighting; prism glass sidewalks; cost \$5000.

THEATERS

D. C., Washington.—Virginia Theater, 605 9th St. N. W., is having plans prepared by Fred A. Schneider, 1450 Newton St. N. E., Washington, for enlargements and improvements to theater.

Fla., Jacksonville.—Miller Wilson of St. George, Fla., is having plans prepared by J. W. Walsh, Jacksonville, for theater; one story; brick; site 90x52½ feet; cost \$15,000.

Mo., St. Louis.—Casablanca Amusement Co. incorporated with \$100,000 capital stock by W. A. Fortner, John F. Alker, W. H. Rich-

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—Mrs. Downey awarded contract, through architects, Milburn, Heister & Co., Home Life Bldg., Washington, to Peter Fersinger, 1 N St. N. W., Washington, for erection of double apartment-house at 1010 4th St. N. W.

Fla., Tampa.—M. C. Nix, 506 Cleveland St., Tampa, and J. H. Wintermute of Eldora, Iowa, awarded contract for erection of apartment-house; 10 rooms.

ASSOCIATION AND FRATERNAL

Tex., Canadian.—Women's Christian Temperance Union awarded contract for erection of proposed clubhouse and public library; two stories; steam heat; electric lights; cost \$10,000.

BANK AND OFFICE

N. C., Winston-Salem.—Home Real Estate Loan & Insurance Co. will expend \$3500 (not including heating) to erect office and store building; mill construction; gas and electric lighting; vault lights for vestibule; contract recently noted awarded to A. H. Walls, Winston-Salem.

Okla., Oklahoma City.—Dora Patterson will erect office building; concrete; facing walls and trimmings of terra-cotta; 60x140 feet; fireproof throughout; concrete floors; wire-screen windows; estimated cost \$29,000; Campbell & O'Keefe of Oklahoma City have contract and will soon begin construction work; Layton, Wemyss-Smith & Hawk of Oklahoma City prepared plans. (Previously mentioned.)

S. C., Heath Spring.—People's Bank of Heath Spring has plans by and awarded contract to Andrew Caution, Heath Spring, for erection of previously noted 22x70-foot brick bank building.

Tex., Elgin.—Miller Bros. awarded contract to Shields Hardwick of Elgin to erect bank and office building; two stories; brick.

Tex., Wolfe City.—J. H. Nail awarded contract to J. H. Cherry, Wolfe City, for rebuilding office and store building occupied by Dr. G. W. Young; 60x125 feet; ordinary brick construction; heating not decided; electric lighting; cost \$15,000; plans by George Lindsay, Greenville, Tex. (Recently reported burned.)

Va., Norfolk.—Dr. Southgate Leigh awarded contract to Walker Construction Co. of

ardson and H. G. Clymer; will erect moving-picture theater; cost \$20,000.

Va., Roanoke.—Jefferson Theater Co. is reported to remodel and enlarge theater, increasing seating capacity to over 1500.

WAREHOUSES

Ga., Savannah.—Atlantic Coast Line Railroad, E. B. Pleasants, chief engineer, Wilmington, N. C., will, it is reported, repair grain and delivery warehouses reported burned.

Md., Annapolis.—Globe Furniture Co. is having plans prepared by Callis & Callis, 2000 St. Paul St., Baltimore, Md., for warehouse and office building. (See "Bank and Office Buildings.")

Md., Baltimore.—Western Maryland Railway, H. R. Pratt, chief engineer, Baltimore, Md., will have plans revised by Emory & Nussear, 415 Professional Bldg., Baltimore, for proposed warehouse to be erected at York and Johnson Sts.; six stories; brick, stone and concrete; 28x116 feet; cost about \$70,000; C. L. Reeder, 919-921 Equitable Bldg., Baltimore, is engineer. (Previously mentioned.)

S. C., Cheraw.—M. B. Smith will have plans prepared by Louis H. Ashbury, Charlotte, N. C., for two-story brick and stone warehouse and office building; 39x100 feet; second floor will have 12 offices; ordinary construction; cost \$6000; will open bids about March 1.

Tenn., Knoxville.—J. W. Edeken will erect \$5000 warehouse.

Tex., Beaumont.—Texas Storage Co. will erect two-story reinforced concrete storage building; plans by H. C. Maier & Co. of Beaumont; bids opened February 10.

Tex., Brownsville.—St. Louis, Brownsville & Mexico Railway, E. C. Burgess, engineer maintenance of way and construction, Kingsville, Tex., has plans for warehouse and office building; two stories; brick; first floor for warehouse and second for offices. (Recently mentioned.)

Tex., Texarkana.—Four States Grocery Co. will have plans prepared by Singleton & Moore of Texarkana for warehouse; two stories and basement; 125x110 feet; cost about \$32,000.

Norfolk to erect brick office building to cost \$2000.

CHURCHES

La., Baton Rouge.—First Presbyterian congregation awarded contract to J. D. Bogan, Baton Rouge, for erection of three-story Sunday-school building; 21x82 feet; ordinary construction; gas heating; electric lighting; cost \$4000; construction begun; material purchased. (Recently noted.)

Okla., Enid.—Mennonite Brethren Church awarded contract to D. C. Bass, 215 W. Elm St., Enid, for erection of frame edifice recently noted; 40x60x20 feet; nine-foot basement; ordinary construction; heating and lighting contracts not let; cost \$5500; plans by R. W. Shaw, 530 Chamber of Commerce Bldg., Enid. Address C. P. Rezier, Route 8, Enid. (See "Machinery Wanted.")

W. Va., Fairmont.—Diamond Street M. E. Church, Hearl McLeffish, secretary, awarded contract to John Kiser, Fairmont, for erection of \$20,000 brick edifice recently noted; 62x90 feet; steam heat; gas and electric lighting; plans by Price & Price, Atlantic Heights, N. J.; Lute Brown, chairman board of trustees. (See "Machinery Wanted.")

CITY AND COUNTY

Ga., Macon.—Firehouse.—City awarded contract to Henderson & Mangham, Macon, for proposed firehouse at Vineville; cost \$7400.

Miss., Marks-Jail.—Quitman County Supervisors, Bolon, Miss., awarded contract to Falls City Construction Co., Louisville, Ky., at \$7500 for erection of jail previously reported.

COURTHOUSES

Ga., Griffin.—Spalding County Commissioners awarded contract at \$72,861.96 to Newton Coal & Lumber Co., Griffin, for erection of courthouse; plans by A. Ten Eyck Brown, 606-10 Forsyth Bldg., Atlanta, Ga. (Recently noted.)

DWELLINGS

Ala., Robertsdale.—Ellis L. Muma has plans and awarded contract to P. G. Dahl, Summerville, Ala., for erection of dwelling recently noted; 12 rooms; 68x73 feet, with 10-foot porch; concrete block; shingle roof; hot-water heat; acetylene lighting; cement sidewalks; cost \$5000. (See "Machinery, etc., Wanted.")

Ark., Little Rock.—S. J. Beauchamp and E.

D. Bracy awarded contract to E. T. Collins, Little Rock, for erection of three two-story frame dwellings; cost \$3000 each.

Ark., Little Rock.—E. D. Bracy awarded contract to E. T. Collins, Little Rock, for erection of two-story frame dwelling; cost \$3000.

D. C., Washington.—Hayes W. Hawkins, 61 I St. N. W., awarded contract to Dowd Bros., Washington, for erection of nine two-story dwellings on Kenyon St.; cost \$18,000.

Fla., Daytona.—Edgar Dunn awarded contract to E. S. Hall, Daytona, for erection of residence; two stories.

Fla., Miami.—E. E. Jackson will expend \$4000 to erect reinforced concrete fireproof residence; two and a half stories; 28x30 feet, with 12x14-foot addition; 12-inch walls; eight rooms and bath; plans by Mrs. Jackson; contract recently noted awarded to Smith & McQuade, 501 Avenue J, Miami.

Md., Baltimore.—W. G. Buckley, 3421 Piedmont Ave., awarded contract to Murray & Haines, 1700 N. Ellamont St., Baltimore, for erection of dwelling on Carlisle Ave., near Garrison Ave.; two and a half stories; frame; 26x33 feet; slate roof; hot-water heat; cost \$3000; plans by M. H. Murray, 1700 N. Ellamont St., Baltimore.

Md., Baltimore.—Archibald Stewart, 816 W. Barre St., awarded contract, it is reported, to A. S. Madery for erection of cottage on Kate Ave.; two and a half stories; ornamental frame; slate roof; concrete foundation; verandas on three sides; 26x32 feet; hot-water heat; electric lights; polished oak and hardwood interior finish; cost \$4000; plans by Henry J. Tinley, 314 N. Charles St., Baltimore.

Md., Baltimore.—Edward D. Keller, 2800 Wallbrook Ave., awarded contract to John T. West, 3006 Westwood Ave., Baltimore, for erection of three two-story brick dwellings on Highland Ave.; 15x50 feet; iron-spot brick; marble bases and steps; hot-water heat; electric light; cost \$6000.

S. C., Yorkville.—D. E. Finley awarded contract to J. J. Keller & Co., Yorkville, for erection of residence.

Tex., Paris.—E. I. Haynes awarded contract to Bob Watson, Paris, for erection of dwelling; construction begun.

Tex., Victoria.—Edward C. Goldman will erect 34x18-foot dwelling; one story; mill construction; electric lighting; cost \$2500; plans by Hull & Praeger, Victoria; contract recently noted awarded to Richard Lovejoy, Victoria.

Va., Norfolk.—Fannie M. Porter awarded contract to G. F. Cox, Norfolk, for erection of frame residence; cost \$2500.

Va., Norfolk.—Dr. Southgate Leigh awarded contract to Walker Construction Co. of Norfolk to erect brick office and residence to cost \$4000; 25x100 feet; ordinary construction; hot-water heat; plans by B. F. Mitchell, Norfolk.

Va., Richmond.—W. F. Drinkard, Jr., will erect two-story brick tenement-house (two dwellings); cost \$10,000; size 4x60 feet; hot-water heat; gas and electric lighting; plans by J. T. Skinner (address care of Mr. Drinkard); contract awarded to W. B. Adams (address care of Mr. Drinkard).

Va., Roanoke.—George MacBain will expend \$10,000 to erect dwelling; 53x78 feet; ordinary construction; hot-water heat; gas and electric lighting; plans by Huggins & Bates, Roanoke; contract recently noted awarded to Rhodes & Wade, Roanoke.

Va., Staunton.—J. J. Flavin awarded contract to John Hemp, Staunton, for erection of residence; brick veneer; cost \$4000.

GOVERNMENT AND STATE

Va., Portsmouth.—Government awarded contract to R. H. Richardson & Son, Hampton, Va., at \$42,973 to erect building No. 23 in Norfolk Navy-yard; contract includes electric runway.

HOTELS

La., Abita Springs.—J. M. Labat Hotel Co. awarded contract to Jenkins Bros., Covington, La., for rebuilding hotel.

Miss., Meridian.—R. A. Thorn awarded contract to C. H. Dabbs, Meridian, for erection of hotel and business building recently noted; four stories; 67x75 feet; steel frame; heating not determined; gas and electric lighting; electric elevator; cost from \$25,000 to \$30,000; plans by P. J. Krouse, Meridian. (See "Machinery Wanted.")

MISCELLANEOUS

Ga., Macon.—Sanatorium.—Dr. H. J. Williams awarded contract to W. W. Delaven of Macon to erect sanatorium; cost \$13,685, exclusive of heating, ventilation, plumbing,

etc., which will make total cost \$20,600; plans by Edward F. Stevens of Boston, Mass.; Carlyle Nisbet of Macon will supervise construction. (Recently mentioned.)

La., Grand Cane.—Postoffice.—Mrs. M. E. Thomas awarded contract for concrete post-office building.

Md., Relay.—Engine-house.—Relay Volunteer Fire Co. No. 1 awarded contract to Mr. Summernich, Annapolis, Md., for erection of building on Arlington Ave.; two stories; frame; 30x40 feet; electric lights; steam heat; cost \$4000; plans by Henry J. Tinley, 324 N. Charles St., Baltimore, Md.

Miss., Meridian.—Clubhouse.—New Standard Club awarded contract to L. W. Hancock of Meridian to erect clubhouse; pressed brick; 50x75 feet; three stories; steam heat; cost \$25,000. (Recently mentioned.)

Tex., Vernon.—Barn.—J. D. Summeroud awarded contract for erection of barn; brick and concrete; 90x110 feet.

Va., Manchester.—Stable.—S. E. Ullman, 1215 Hull St., awarded contract to E. Bass, 15th and Porter Sts., Richmond, Va., for erection of stable; 28x76 feet; mill construction; cost \$2500. (Previously noted.)

Va., Clifton Forge.—Studio.—Hot Springs Valley Investment Co., Hot Springs, Va., awarded contract to J. Robert Criser, Warm Springs, Va., for erection of studio on Daniel Boone reservation, to be occupied by Hamilton King of New York; 50x60 feet; rustic finish; mill construction; cost \$3000; plans by H. C. Allen, Hot Springs. (Recently noted.)

RAILWAY STATIONS

Ga., Athens.—Seaboard Air Line Railway Co., W. L. Seddon, chief engineer, Portsmouth, Va., will expend \$25,000 to erect passenger station; 40x130 feet, and tram sheds; ordinary construction; steam heat; electric lighting; contract recently noted awarded to A. M. Walkup, Richmond.

SCHOOLS

D. C., Washington.—District Commissioners awarded contract at \$92,500 to George Wyne, 222 Munsey Bldg., Washington, for erection of 12-room school at 8th and T Sts. N. W. (Recently noted.)

Miss., Mendenhall.—City awarded contract at \$7500 to Archie Dickson, Mt. Olive, Miss., for erection of Agricultural High School building.

Okla., Woodward.—Board of Education will erect 137x82-foot high-school building; two stories and basement; mill construction; concrete sidewalks; heating, plumbing and lighting contracts not let; cost \$52,000; plans by W. E. Hulise, Woodward; contract recently noted awarded to George Fletcher, 435 American National Bank Bldg., Oklahoma City, Okla.

Tenn., Maryville.—City awarded contract to D. A. Giffin & Son, Knoxville, Tenn., for erection of three story 77x78-foot high school and two-story 77x78-foot ward school building recently noted; ordinary brick construction; steam heat; cost \$22,686; plans by A. E. Gredig, 406 Bank & Trust Bldg., Knoxville.

Tex., Dallas.—City awarded contract to Harry H. Gowins, Dallas, for erection of school in North Oak Cliff; fireproof construction; four rooms and basement; cost \$16,000.

Va., Roanoke.—City awarded contract to J. C. Nesbit, Roanoke, for erection of central grammar school; three stories and basement; 30 classrooms; assembly hall to seat 1000; first floor and all corridors of fireproof construction; interior trimmings chiefly pine; total cost about \$90,000; plans by Charles M. Robinson, Richmond. (Recently noted.)

Va., Harrisonburg.—City awarded contract at \$15,356 to William Bucher & Son, Harrisonburg, for erection of Waterman school building; six rooms and hall; stone construction; will probably award contract at \$1972 to American Heating & Ventilating Co. of Richmond, Va., for heating and ventilating; also to same company at \$1525 for heating, ventilating and sanitary fixtures for colored school; will probably award contract at \$7000 to William Bucher & Son for construction of negro school. (Recently noted.)

STORES

Ark., Little Rock.—H. L. McFarland awarded contract to C. M. Leird, Little Rock, for erection of two-story brick store; cost \$500.

D. C., Washington.—William Hayden & Co. awarded contract to Baker & Perry, Washington, for erection of building at 10th and F Sts. N. W.; plans by N. R. Grimm, 627 F St. N. W., Washington.

N. C., Winston-Salem.—William A. Church

awarded contract to James Dunigan, Winston-Salem, for erection of business block; to contain two store-rooms, 24x22 feet and 16x22 feet; ordinary construction; electric lighting; stoves; brick sidewalks; plans by owner. (Recently noted.)

Okla., Tulsa.—C. H. Hatcher awarded contract to W. M. Combs, Tulsa, for erection of 100x100-foot business block; one story; brick; natural-gas heating; gaslighting; cement sidewalks; cost \$10,000; plans by J. E. Sanders, Tulsa. (Recently noted.)

Tenn., Chattanooga.—Ferguson Bros. awarded contract to Mountain City Cabinet Co., 712 Cherry St., Chattanooga, for remodeling and addition to store building on Market St.

Tenn., Knoxville.—Miller Stores Co. awarded contract to J. M. Dunn & Son, Knoxville, for erection of store; 68x130 feet; six stories and basement; cost \$100,000; duplicate of present structure and give total space of 138,000 feet; plans by R. F. Graf & Sons, Knoxville. (Recently noted.)

Tex., Dallas.—J. R. Bradfield awarded contract to M. A. Faber, Dallas, for erection of business building; two stories; brick; cost \$8000; plans by J. O. Gill, Dallas.

Tex., Greenville.—Seaman-East Grocery Co. awarded contract to Dixon & Britton, Greenville, for erection of addition to business building; frontage 90 feet; cost \$4000.

Tex., Madisonville.—N. M. Wycough will erect two-story brick store; 28½x90 feet; cost \$4500; contract for brick work awarded to Charles Fuqua, Shiro, Tex.; for woodwork to B. T. Poole, Madisonville. (Recently noted.)

Tex., Nordheim.—Osterloh & Neutzer awarded contract to Lutzenbacher & Such-

ert, Nordheim, for erection of store building; brick; 135x65 feet; basement 21x65 feet; cost \$14,740.

Tex., Port Lavaca.—D. C. Roemer awarded contract to Clark & Bourland, Port Lavaca, for erection of one-story brick business building. (Recently noted.)

Va., Norfolk.—E. Nicholson will expend \$6300 to erect store; 26x110 feet; ordinary brick construction; electric wiring; electric dumb waiter; plans by R. E. Mitchell, Norfolk; contract recently noted awarded to R. B. Darden, 1811 Granby St., Norfolk.

WAREHOUSES

Md., Baltimore.—Thomas L. Jones & Son, 410 W. Saratoga St., Baltimore, has contract to remodel warehouse at 15 N. Howard St. occupied by Luckett-Rittler Company.

Md., Baltimore.—John W. Waldeck Company awarded contract to John K. Melver, 309 Wilson Bldg., Baltimore, to remodel 4-story warehouse at 105 N. Howard St. leased by J. H. Waldeck Company; cost about \$3000.

Mo., St. Louis.—Bemis Bros. Bag Co., 4th and Poplar Sts., awarded contract to James Black Masonry & Contracting Co., St. Louis, for erection of warehouse; seven stories and basement; 60x120 feet; reinforced concrete construction; cost \$50,000. (See "Machinery Wanted.")

Tenn., Knoxville.—Edelen Transfer & Storage Co., J. W. Edelen, president, 6-8 Emory Place, awarded contract to J. M. Dunn & Son of Knoxville to erect warehouse; four stories; brick; 50x150 feet; sprinkler system; electric elevator; cost \$15,000.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Bay Minette.—The Pensacola & Perdido Railroad is reported completed from Pensacola to Millview, and grading forces and engineers are working between Millview and Weeks Bay, the terminus. Contract has been let to John J. Johnson of Midlin, Ala., to build the trestle across Perdido Bay from Inzerity Point to Cummins Point, 1¼ miles, at a cost of about \$60,000. Charles Barclay of Bay Minette and others are interested.

Ala., Birmingham.—It is rumored that the Louisville & Nashville Railroad will soon announce plans to double-track its line all the way from Nashville to Mobile. W. H. Courtenay is chief engineer at Louisville, Ky.

Ala., Montgomery.—The Alabama Traction Co., says a press report, has begun construction of its proposed line at Montgomery. C. G. Abercrombie is president.

Ark., Dardanelle.—The Dardanelle, Ola & Southern Railway, says a dispatch, has been purchased at receivers' sale by W. V. Delahunt, representing the Commonwealth Trust Co. of St. Louis. The line is about 15 miles long, and it is reported that improvements will be made. F. S. Yantis is superintendent at Dardanelle, Ark.

Ark., Mammoth Springs.—Survey is reported begun for the proposed electric railway from Mammoth Springs, Ark., to West Plains, Mo., about 30 miles. The secretary of the Board of Trade at Mammoth Springs may be able to give information.

Ark., Murfreesboro.—An officer of the Memphis, Paris & Gulf Railway is quoted as saying that contract has been let to the Ware Construction Co. of St. Louis, Mo., to build the line from Murfreesboro to Pine Bluff, Ark., 166 miles. Subcontracts are being awarded. J. H. Allen, Pine Bluff, Ark., is chief engineer.

Fla., Wauchula.—The Wauchula Land Co. will build a railroad to develop its property from the Wauchula Manufacturing Co.'s mills west eight miles to the Charlotte Harbor & Northern Railway. C. R. Knight is engineer.

Ga., Atlanta.—A company is being organized, it is reported, to build an electric railway from Buckhead to the new Brookhaven Club along the Peachtree road. Those interested are John D. Little, Walter P. Andrews, John Aldredge, Walter Pharr, Charles P. Glover, W. T. Gentry and others.

Ga., Blakely.—The Blakely Southern Railroad Co., which has applied for a charter, proposes, according to information received from an officer, to build a line from Blakely to Jakin, Ga., 22 miles, route being due South. Bids will not be asked, but local contracts will be let. It is understood that the officers will include W. C. Snodgrass, president, Thomasville, Ga.; J. A. Mitchell, vice-president and general manager; others

interested being W. I. MacIntyre, W. D. Hargrave and others.

Ga., Hawkinsville.—The Hawkinsville & Western Railway Co., it is reported, will apply to the Railroad Commission for authority to issue \$300,000 of securities, \$100,000 of stock and \$200,000 of bonds to build its line from Hawkinsville to Perry, Ga., 22 miles. T. B. Ragan is president at Hawkinsville.

Ga., Macon.—An officer of the Central of Georgia Railway, referring to a recent report, says it is possible that some additional sidetracks will be built between Macon and Fort Valley, but if done it will be by the company's forces and no new materials are required.

Ga., Valdosta.—The Valdosta, Moultrie & Western Railroad Co. is reported to have closed a deal for additional properties upon which to erect terminals. Frank Roberts is president.

Ga., Waycross.—A dispatch says that D. G. Edwards of New York, with R. G. Zeigler as consulting engineer, will have charge of survey for the Atlanta, Waycross & Northern Railroad from Waycross to Abbeville, Ga. Headquarters at Waycross.

Ky., Brandenburg.—The Louisville, Henderson & St. Louis Railroad, it is reported, will build a branch to the Kosmos cement quarry and the new plant one mile west thereof. S. Stites is chief engineer at Louisville, Ky.

Ky., Yale.—Official: The Licking River Railroad Co. will build 15 miles of line from Yale to Frenchburg, Ky., along Beaver Creek, including one bridge over that stream. Line is narrow gauge, but on standard ties for conversion to standard later. J. H. Fulmer, Jr., is president; W. W. Hubbard, vice-president; James A. Roper, treasurer; John T. Johnson, general manager; H. G. Niles, secretary, and H. R. Stone, auditor. Headquarters at Yale, Ky. No date is named to receive bids.

La., Jena.—An officer of the Louisiana & Arkansas Railway is quoted as saying that permanent location has been made for the contemplated extension from Jena to Natchez, Miss., 50 miles, but it is not yet decided when construction will be undertaken. W. H. Vance is engineer at Stamps, Ark.

La., New Orleans.—C. D. Warren, president of the New Orleans Southern Railroad, who, with others, has recently acquired control of the line, writes that plans are not yet matured. This refers to a report that extension and improvement may be undertaken. His address is Toronto, Canada.

La., New Orleans.—An officer of the New Orleans Southern Railway, referring to the report regarding change of ownership, says that the management has not decided when the contemplated new work will begin.

Md., Baltimore.—The Baltimore & Pennsylvania Electric Railway Co. contemplates re

assumption of grading on its proposed line from Reisterstown, Md., 16 miles from Baltimore, to Hanover, Pa., as soon as weather will permit. Thomas F. Degnon, a contractor of Philadelphia, has made a trip over the route. John Pierce Bruns, 44 Old Builders' Exchange Bldg., Baltimore, and others are interested.

Md., Frederick.—An officer of the Frederick Railroad writes that the loop line at Frederick for interchange of freight is practically completed.

Md., Frederick.—The Frederick Railroad, says a dispatch, has announced that it will spend \$50,000,000 on terminals; E. L. Coblenz is president and O. B. Coblenz chief engineer.

Md., Frederick.—President Emory L. Coblenz of the Frederick Railroad is quoted as saying that no extensions are contemplated at present.

Miss., Gulfport.—The Gulf & Ship Island Railroad has filed a mortgage for \$1,000,000 of 6 per cent. bonds, part of which will be used for improvements. W. H. Gardner, Jr., is chief engineer at Gulfport, Miss.

Mo., Joplin.—The Southwest Missouri Railway Co. has been granted permission to extend its line one mile in Joplin.

N. C., Canton.—The Tennessee & North Carolina Railroad, it is reported, contemplates extending up the Pigeon River to Canton and thence up the west fork of that stream to Sunburst, N. C. A. J. McMahon is superintendent at Newport, Tenn.

N. C., Concord.—An election is to be held March 14 in townships Nos. 6, 8, 9 and 10 of Cabarrus county to vote on proposed issues of bonds in aid of the Salisbury Railroad Co. The issue in No. 8 is \$40,000, and in the others \$15,000 each. John B. McAllister is secretary of the County Commissioners.

N. C., Elkin.—A dispatch says that construction of the Elkin & Alleghany Railroad is progressing, the forces now being engaged on the last lap of the work.

N. C., Robbinsville.—An officer of the Graham County Railroad Co. writes that survey is not completed for the proposed line from Topton via Robbinsville to Slick Rock, N. C., 45 miles. Country is rolling and along the Cheoah River. Date not set to receive bids for construction. Duff Merrick of Asheville, N. C., is president; George B. Walker of Robbinsville, vice-president and treasurer; Alf. S. Barnard of Asheville, secretary; the other directors being R. B. Slaughter and D. W. Swan of Robbinsville. D. B. Burnes is chief engineer.

N. C., Greensboro.—V. C. McAdoo and others are reported working on a plan to build a railroad from Greensboro to Roxboro, N. C.

N. C., Stackhouse.—Official: The Madison County Railway Co. is building 10 miles of line with its own forces through the mountains from Runion to Allentand, N. C., connection being made at Runion with the Southern Railway. The Laurel River Logging Co. is back of the enterprise. A. G. Betts is president and treasurer; A. A. McQuide, vice-president; E. B. McMillan, secretary.

N. C., Winston-Salem.—State Senator H. R. Starbuck is reported as saying that a bill will be introduced in the Legislature to charter a railroad from Winston-Salem to Raleigh via Chapel Hill. Another report says that the route will be via Greensboro and High Point, and that the work will be directed by W. L. Spoon, State Highway Engineer. C. H. Ireland, C. H. McKnight and John J. Pinnix of Greensboro, N. C., are also said to be interested.

N. C., Winston-Salem.—A dispatch from Raleigh says that a bill has been introduced in the Legislature to charter the Forsyth & Yadkin Railroad Co. to build a line in Forsyth, Yadkin, Davidson, Guilford and other counties to connect with the proposed Elkin & Alleghany Railroad. P. H. Hanes and others, as previously reported, are incorporators.

N. C., Woodlawn.—The Mount Mitchell Railroad Co. has been chartered to build 10 miles of line from Sevier, on the Carolina, Clinchfield & Ohio Railway, to a point at the headwaters of Turkey Cove Creek in McDowell county; capital \$10,000 to \$100,000. The stockholders are T. T. Adams of Richmond, Va.; John B. Adams, L. T. Adams and Jordan Thompson, all of Woodlawn, N. C., and J. W. Pless of Marion, N. C.

Okl., Hugo.—The tentative plan of the Hugo & Atoka Northwestern Railroad is to build a line 50 miles long from Hugo northwest, although the route may be changed to reach Reynolds instead of Atoka. Contract is let to Col. C. C. Godman of Fort Smith, Ark. Four surveys are being made. Paul B. Bigger is secretary, Chamber of Commerce at Hugo, Okla.

Okl., Oklahoma City.—The Oklahoma Railway Co., according to a telegram, has begun construction of its extension from Oklahoma City to Edmond, Okla. J. W. Shartell is general manager at Oklahoma City.

Okl., Shawnee.—Perry Rodkey is reported securing right of way for the Shawnee Short Line Electric Railway Co., which proposes to build railways from Oklahoma City to Joplin Mo., via Shawnee, with a line also from Shawnee to Denison, Tex. Martin J. Bentley of Shawnee is president; C. C. Wright of Ada, Okla., secretary; H. H. Hull of Memphis, chief engineer, and Perry Rodkey, right of way agent.

Okl., Tulsa.—Charter has been issued to the Sand Springs Interurban Railway Co., previously reported, to build a line seven miles long between Tulsa and Sand Springs; capital \$20,000. Charles Page is president and W. E. Rhode is general manager, both at Tulsa.

S. C., Greenville.—Reported that Porter & Boyd of Charlotte, N. C., have been awarded contract to build a spur line of railroad from the Southern Railway to the site of the Westervelt Mills, about three-quarters of a mile. About 18,000 cubic yards of material will have to be handled. Approximate cost, \$700.

S. C., Greenville.—The Greenville & Knoxville Railroad Co. is grading its extension from Riverview to a point near Drakes, the contractor being the E. A. Hudson Company of Atlanta, Ga.; W. H. Patterson of Atlanta is president of the road.

Tenn., Jonesboro.—A meeting has been called to consider plans for the issue of \$50,000 of bonds to build a railroad from Jonesboro to Johnson City. H. C. Beauchamp, president of the Board of Trade, can probably give information.

Tex., Bryan.—The Bryan Brazos Valley Railroad Co., says a director, proposes to build 26 miles of line from Bryan to a point near Clay, Tex., including a bridge about 400 feet long over the Brazos River; date for receiving bids not fixed. The directors include W. E. Saunders, president; John K. Parker, vice-president and general manager; A. W. Wilkerson, treasurer; J. W. Doremus, secretary, and J. Allen Myers of Bryan, Tex.

Tex., Dallas.—The Northern Texas Traction Co., it is reported, contemplates building two interurban lines—one from Dallas to Terrell, Tex., and the other from Dallas to Waxahatchie; also the construction of suburban extensions, besides a cross-town line.

Tex., Fort Worth.—At a business men's meeting in the Board of Trade rooms William Capps, I. H. Burney, Ed Farmer and others were appointed a committee to organize a construction company with \$500,000 capital to build a railroad from Fort Worth northwest 60 miles to Jacksboro, Tex., and perhaps on into New Mexico, although connection may be made at Jacksboro with the Gulf, Texas & Western Railway, which runs from there northwest to Seymour, 75 miles farther.

Tex., Houston.—Reported that the Western Land Corporation of Houston will make survey for a motor-car railroad from the San Leon Station, on the Southern Pacific Railroad, to the San Leon Hotel.

Tex., Longview.—Construction is reported progressing rapidly on the Port Bolivar Iron Ore Railway northward out of Longview, more than 400 teams being on the work.

Tex., Mercedes.—A letter says that an excellent opportunity is presented for the construction and operation of an electric railway in the vicinity of Mercedes. Waldo & Rieth, contracting engineers at Mercedes, Tex., may be able to give further information.

Tex., Orange.—The Lutch & Moore Lumber Co. of Orange is reported making a four-mile extension of the Gulf, Sabine & Red River Railroad which it owns in Calcasieu parish, La.

Va., Culpeper.—A letter says that the Rappahannock Railroad Co. is being promoted with every assurance of success to build a line about 30 miles long from Washington to Culpeper. Surveys not yet completed. There is no organization as yet. A. W. Pulliam at Culpeper, Va., may be able to give further information.

Tex., Stamford.—A dispatch says that the Stamford & Eastern Railway has completed survey for its proposed line from Stamford to Fort Worth, Tex., 150 miles.

Va., Freeling.—A dispatch says that the Currier Lumber Co. contemplates extending its narrow-gauge railroad from Pound Creek to the mouth of Brush Creek and perhaps to Clintwood, Va.

Va., Norfolk.—The New York, Philadelphia & Norfolk Railroad Co., it is reported, has bought 15 lots in Port Norfolk to enlarge its

yard trackage. Elsha Lee is superintendent and C. E. Brinser division engineer, both at Cape Charles City, Va.

Va., Norfolk.—An officer of the Norfolk & Portsmouth Belt Line, with reference to the report of contemplated work at Pinner's Point, writes that six tracks in the yard at Port Norfolk are being lengthened by the company's forces; also that about one-half mile of siding has been built at Berkley. This is all the work contemplated at present.

Va., Richmond.—Rumored that a plan is under consideration to build a railroad in a direct line from Hampton Roads to Washington, D. C., and that foreign capital is interested. The route is said to be via Yorktown, Gloucester Point, Saluda and Fredericksburg, Va. Secretary of the Chamber of Commerce at Richmond may be able to give information.

Va., Salem.—The Norfolk & Western Railway, it is reported, has put in operation its new branch from Salem to Crusher, 10 miles.

W. Va., Fairmont.—An official is quoted as confirming report that contract for construction of the Buckhannon & Northern Railroad from Rivesville, W. Va., to Point Marion, Pa., has been let to Patterson, Moran & Luck, Fitzsimmons Bldg., Pittsburg, Pa.

W. Va., Ireland.—Information received concerning the Walkersville & Ireland Railroad quotes J. B. Given, chief engineer, as saying that a large force is grading the line for standard gauge, but at present a narrow-gauge track will be put down. It will connect with the Coal & Coke Railway at Wal-

kersville, W. Va. W. E. Mick is president; W. B. Mick, treasurer. Headquarters at Ireland, W. Va.

W. Va., Kenova.—An officer of the Norfolk & Western Railway says that it will not build a new bridge over the Ohio River, but will widen the present structure for double track. C. S. Churchill, Roanoke, Va., is chief engineer.

W. Va., Pax.—The Kanawha, Glen Jean & Eastern Railway is reported to have completed and put in operation its branch from Sugar Creek Junction to Pax, six miles.

STREET RAILWAYS

Ala., Mobile.—C. V. Shoub of Mobile is reported promoting plans to build a street railway 1½ miles long.

Fla., St. Petersburg.—Reported that the St. Petersburg & Gulf Railway Co. will build an extension one and a half miles long to Coffee Pot Bayou.

Miss., Vicksburg.—A dispatch says that E. J. Bomer and S. B. Wilson were granted a franchise for an electric street railway over the National Military Cemetery road between Vicksburg and Walters, and construction is expected to begin soon.

Mo., Irondale.—James P. Ward of Irondale is reported as saying that preliminary arrangements are in progress to build an electric railway.

Tex., Beaumont.—The Beaumont Traction Co., says a dispatch, contemplates improvements to cost more than \$100,000, including double track.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressors and Drills.—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want air compressor with capacity for four drills; also air drills with all equipment; good condition.

Air Compressor.—Mitchell & Reeder, Westminster, S. C., want five-tool air-compressor outfit.

Bakery Machinery.—D. P. Magruder, Wood stock, Va., wants prices on bakery supplies.

Bank Fixtures.—Ocala National Bank, Ocala, Fla., wants prices on bank fixtures.

Barrel Machinery.—Marston Cooperage Co., O. B. Guinn, president, Marston, Mo., wants prices on slack-barrel machinery.

Belting.—Chas. F. Rothenhoefer, 207 E. 7th St., Frederick, Md., wants new or second hand leather or rubber belting.

Blacksmithing Equipment.—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want blacksmith outfit, including forges, anvils, tongs, etc.; good condition.

Boiler.—Thomaston Ice Co., Thomaston, Ga., wants prices on 50-horse-power boiler.

Boiler.—W. J. Francis, general delivery, Windsor, N. C., wants prices on 100-horse-power return tubular boiler; new or second-hand.

Boilers and Engines.—Cramer Furniture Co., Thomasville, N. C., wants prices on boilers and engines.

Boilers.—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want two 75-horse-power fire-box boilers; good condition.

Boilers.—Jacksonville Iron Works, S. B. Skinner, president, Box 382, Jacksonville, Fla., wants agents' prices on boilers.

Box Machinery, etc.—Bay Minette Concrete Co., Bay Minette, Ala., wants prices on machinery for manufacturing berry boxes and potato hampers.

Brick and Tile Machine.—Nabring Brick & Tile Co., Tullahoma, Tenn., wants combined brick and tile machine; to be operated by engine of 30 (or less) horse-power; new or second-hand.

Bridge Construction.—Duval County Commissioners, Jacksonville, Fla., will receive bids until 9:30 A. M. February 24 for construction of reinforced concrete culvert, 15-foot span, according to plans on file in office of Gall L. Barnard, County Engineer, Room 9, Courthouse; also for unfinished portion of grading on Mandarin Rd.; certified check,

payable to C. W. Ellis, chairman of board, for \$100 to accompany each bid.

Bridge Construction.—Bids will be received at office of S. Myers, County Clerk, New Martinsville, W. Va., until noon February 29 for construction of superstructure of truss bridge, either with or without center pier, across Big Fishing Creek at Reader, Wetzel county; bidders to submit plan of bridge, with specifications and strain sheet, for steel work; total length of bridge, 165 feet; 16-foot roadway with reinforced concrete floor; for further information address W. J. Alexander, County Roads Engineer.

Bridge Construction.—See "Road Construction."

Bridge Construction.—Board of Public Roads, W. A. Harris, secretary, Spotsylvania, Va., will receive bids on or before March 6 for construction of four steel bridges with cement head walls; A. F. Brown, engineer in charge, Fredericksburg, Va.

Broom Machinery.—J. M. Lawton, care of Asheville Lumber Co., Asheville, S. C., wants information and prices on machinery for small broom factory.

Building Materials, etc.—Westlake Construction Co., St. Louis, Mo., wants prices on wrecking, cut stone, fireproofing, roofing, plastering, painting, plumbing, excavating, steel and iron, mill work, sheet metal, marble and tile, glass and electric wiring (company figuring on general contract for 10-story bank building at Shreveport, La.)

Building Materials.—Farmers' Hardware Co., Shelby, N. C., wants prices on steel I beams and columns, stone, plate-glass, etc.

Building Materials.—R. A. Thorn, Meridian, Miss., wants prices on building materials for \$25,000 four-story steel-frame hotel and business building.

Building Materials.—Cantrell & Magness, Harrison, Ark., wants prices on building materials, including concrete and brick.

Building Materials, etc.—P. G. Dahl, Summerville, Ala., wants prices on full line of building materials and machinery of interest to architects and builders.

Burglar Alarms.—N. E. Pitre, Boyle, Miss., wants prices on burglar alarms.

Cable Drums.—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want two extra heavy cable drums with driving gear; good condition.

Cash Register.—Chas. F. Rothenhoefer, 207 E. 7th St., Frederick, Md., wants new or second-hand cash register.

- Chair Machinery.**—Cramer Furniture Co., Thomasville, N. C., will open bids March 1 for installation of automatic machinery and general equipment for manufacturing chairs; daily capacity 2000 chairs.
- Chemical Engine, etc.**—City of Newnan, Ga., wants combination hose and chemical wagon. Address T. M. Goodrum.
- Conduits, Socket Joints.**—Office of Chief Signal Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until February 20 for furnishing one carload conduit, bituminized fiber, Orangeburg, three-inch socket joint, approximately 25,000 feet per carload, price to include sufficient cement for cementing joints.
- Concrete Mixer.**—Eastern Railway Supply Co., 413 American Bldg., Baltimore, Md., wants half-yard Foote concrete mixer equipped with automatic loading device.
- Cork.**—Chas. F. Rothenhoefer, 267 E. 7th St., Frederick, Md., wants granulated and sheet cork.
- Corks Machinery.**—U. E. Swann, care of Beaufort Banking & Trust Co., Beaufort, N. C., wants information and prices on machinery for manufacturing corks for fish nets and seines; will use gum root material.
- Cranes.**—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want two locomotive cranes, 50-foot or more boom, with extra drum for working clamshell bucket.
- Dairy Machinery.**—C. M. Smith, Smith & Lipscomb, Gaffney, S. C., wants machinery for dairy having capacity of 15,000 to 25,000 pounds milk per week.
- Dies.**—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want set pipe dies and vise; good condition.
- Dredge.**—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want dipper dredge outfit; 1 to 1½-yard dipper; dipper handle long enough to dredge 20 feet.
- Dredging.**—Bayboro Investment Co., H. A. Kellam, secretary, St. Petersburg, Fla., will receive bids until 7:30 P. M. March 1 for dredging 100,000 cubic yards of material at Bayboro; certified check, \$500. Address Mr. Kellam for specifications.
- Doors and Windows.**—N. E. Pitre, Boyle, Miss., wants prices on doors and windows for store fronts; also for church.
- Drills.**—See "Air Compressors and Drills."
- Dry Goods, etc.**—Behari Lal Maheshwary & Co., Amritsar, India, want to correspond with exporters of cotton and woolen goods, hosiery, stationery, hardware and other products.
- Elevator.**—R. A. Thorn, Meridian, Miss., wants prices on elevator.
- Electric-light Plant.**—Chickasha Cotton Oil Co., R. G. Latting, general superintendent, Chickasha, Okla., wants to correspond with parties having second-hand machinery for electric-light plant for town of 3000 people.
- Electric Motors.**—C. H. Ruggles, Tuscaloosa, Ala., wants one two-horse-power and one 7½-horse-power three-phase motors.
- Electric Wiring.**—See "Building Materials, etc."
- Electric Plant.**—N. E. Pitre, Boyle, Miss., wants prices on small electric plant.
- Engine.**—W. J. Francis, general delivery, Windsor, N. C., wants prices on 80-horse-power engine, Corliss or other make; new or second-hand.
- Engines.**—See "Boilers and Engines."
- Engines.**—Jacksonville Iron Works, S. B. Skinner, president, Box 382, Jacksonville, Fla., wants agents' prices on engines.
- Excavating.**—See "Building Materials, etc."
- Feed-mill Machinery.**—Mount Gilead Cotton Oil Co., Frank McAulay, president, Mount Gilead, N. C., will want prices on feed-mill machinery.
- Fireproofing.**—See "Building Materials, etc."
- Fish-net Corks.**—See "Corks Machinery."
- Flooring.**—Bemis Bros. Bag Co., 4th and Poplar Sts., St. Louis, Mo., undecided as to floor finish; wants to correspond with manufacturers.
- Flour Mill Machinery.**—W. J. Berryman, Edenton, N. C., wants to correspond with manufacturers of flour mill machinery and equipment.
- Fire Department Apparatus.**—See "Chemical Engine, etc."
- Furniture.**—See "Mail-order Goods."
- Galvanized Siding.**—C. H. Ruggles, Tuscaloosa, Ala., wants galvanized rock-faced siding.
- Gas Producers.**—See "Machinery and Equipment."
- Gas-plant Machinery.**—J. T. Pullen, Laurel, Miss., wants machinery (water-gas type) to equip gas plant.
- Gasoline Engine.**—W. B. Newsome, Ahoskie, N. C., wants 8 or 10-horse-power second-hand gasoline engine; standard make.
- Gasoline Engines.**—Stewart Bros., printers and bookbinders, Winston-Salem, N. C., want information and prices on small and medium sized gasoline engines.
- Gasoline Engine.**—Boone County Flour Mills, Petersburg, Ky., wants 25 to 40-horse-power gasoline engine; second-hand.
- Ginnery.**—Mount Gilead Cotton Oil Co., Frank McAulay, president, Mount Gilead, N. C., wants prices on complete 40-bale ginnery.
- Glass.**—N. E. Pitre, Boyle, Miss., wants prices on plate-glass for windows.
- Glass.**—See "Building Materials."
- Grading.**—See "Bridge Construction."
- Grading.**—Bids will be received at Clerk's office, Covington, Va., until noon February 20 for grading about half mile of approaches to bridge over Jackson River at Kelley's Ford and for construction of rubble walls at bridge; plans and specifications furnished on application to P. St. J. Wilson, State Highway Commissioner, Richmond, Va.; certified check, \$100.
- Grading.**—J. W. Wright, Jr., Union Springs, Ala., wants to sublet part of contract for grading in Middle Georgia; team work; good material and prices; six months' work. (Recently incorrectly noted under Union Springs, Ga.)
- Hardware, etc.**—Success Novelty Co., Richmond, Va., wants prices, with view to agency, on pumps, wrenches, etc., of interest to hardware and mill trade.
- Hardware.**—Behari Lal Maheshwary & Co., Amritsar, India, want to correspond with exporters of hardware. (See "Dry Goods, etc.")
- Hardware.**—See "Mail-order Goods."
- Heating Apparatus.**—See "Piping, etc."
- Heating Plant.**—C. P. Regier, Route 8, Enid, Okla., wants prices on heating plant for \$500 church.
- Heating Plant.**—R. A. Thorn, Meridian, Miss., wants prices on heating plant for \$25,000 hotel and business building.
- Heating Plant.**—Hearl McLeffresh, secretary, Fairmont, W. Va., wants prices on steam-heating plant for \$20,000 edifice.
- Hoist.**—Hollingsworth Wheel Co., Hagerstown, Md., wants rebuilt or first-class second-hand belt-driven stationary hoist; single or double drum.
- Hydraulic Press.**—W. J. Francis, general delivery, Windsor, N. C., wants prices on hydraulic press.
- Ice Machinery.**—John J. Fall, Ravenswood, W. Va., wants prices on six-ton ice plant.
- Ice-cream Machinery.**—Farmville Ice Plant, Farmville, Va., wants prices on ice-cream machinery.
- Ice Machinery.**—Chickasha Cotton Oil Co., R. G. Latting, general superintendent, Chickasha, Okla., wants to correspond with parties having second-hand ice machinery.
- Ice Machinery.**—N. E. Pitre, Boyle, Miss., wants prices on ice plant.
- Jewelry.**—See "Mail-order Goods."
- Lathe.**—C. H. Ruggles, Tuscaloosa, Ala., wants 16-inch engine lathe.
- Laundry Machinery.**—American Machinery Co., 49 S. Forsyth St., Atlanta, Ga., wants second-hand light laundry outfit. Send full information, name each machine and price on each piece, if can be bought separately.
- Lighting Plant.**—C. P. Regier, Route 8, Enid, Okla., wants prices on lighting plant for \$500 church.
- Locomotives.**—See "Miniature Railroads"
- Locomotive.**—Ted Blackmore, Summit, Miss., wants dummy engine for coke or anthracite coal.
- Locomotive.**—American Metallic Packing Co., Lexington, Ky., wants second-hand 40 to 65-ton standard-gauge railroad locomotive; Tennessee delivery; good condition.
- Locomotive.**—J. H. Macleary, Suffolk, Va., wants 16x16-cylinder Mogul engine, 36-inch gauge. Give full specifications, dealers' price and photograph.
- Machine Supplies.**—C. H. Ruggles, Tuscaloosa, Ala., wants machine supplies.
- Machine-shop Equipment.**—Consolidated Tramway Co., Roanoke, Va., wants power presses, bulldozers, punches, drills and general machine-shop equipment.
- Machinery.**—See "Building Materials, etc."
- Machinery and Equipment.**—H. W. Davant, Box 93, Roanoke, Va., wants to correspond with manufacturers of following machinery, etc., with view to representation: Equipment for contractors, railroads, furnaces and mines; power plants of all types; engines and boilers; gasoline engines; gas-engine producers; machine tools.
- Mail-order Goods.**—Mail Order House, Box 333, Collins, Miss., wants to correspond with manufacturers of jewelry, notions, rubber goods, novelties, fancy dry goods, shoes, hats, collars, handkerchiefs, neckwear, hosiery, umbrellas, perfumery, baking-box powder, flavoring extracts, dry medicine, light hardware, kitchen utensils, ornaments for mantel and shelf, furniture, stoves and toys of all kinds.
- Manganese-steel Castings, Wire Rope, etc.**—Sealed proposals will be received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. March 3, and then opened, for furnishing manganese-steel castings, steel castings, wire rope, gear and milling cutters, auger bits, foundry core machine and electric fans; blanks and general information relating to this circular (No. 622) may be obtained at above office or offices of assistant purchasing agents, 24 State St., New York; 55 National Realty Bldg., New Orleans; 1086 North Point St., San Francisco; also from U. S. Engineer Offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill.; and Chamber of Commerce and Board of Trade, Tacoma; F. C. Boggs, Captain, Corps of Engineers, U. S. A., General Purchasing Officer.
- Marble.**—See "Tile and Marble Work."
- Mining Machinery.**—Kimberly Coal Co., W. S. Thompson, manager, Trenton, Ky., will want necessary machinery for slope mining.
- Miniature Railroads.**—D. R. Creecy, president Interstate Suburban Realty Corporation, 30 N. 9th St., Richmond, Va., wants addresses of manufacturers of miniature engines and railroads.
- Metal Clasps and Frames.**—Nicholas Georgiades, Georgiades Han, Sirkedji, Stamboul, Constantinople, Turkey, wants addresses of American manufacturers of metal clasps and frames (with handles) for leather bags, portmanteaux, etc.
- Mortising Machine.**—Leesville Coffin & Casket Co., Leesville, S. C., wants small second-hand chain-saw mortising machine.
- Oil-mill Machinery.**—Mount Gilead Cotton Oil Co., Mount Gilead, N. C., wants prices on oil-mill machinery.
- Oil-mill Machinery.**—M. L. Hinson, Rockingham, N. C., wants cottonseed-oil mill machinery for small mill.
- Paving.**—Duval County Commissioners, Jacksonville, Fla., will receive bids until 9:30 A. M. February 24 for paving portion of Lincoln Ave. near Seaboard Air Line Railway shops; specifications and plans on file in office of Gail L. Barnard, County Engineer, Room 9, Courthouse; certified check for \$300, payable to C. W. Ellis, chairman County Commissioners, to accompany each bid.
- Paving.**—Bob Parman, City Clerk, Oklahoma City, Okla., will receive bids until 5 P. M. February 20, which will be considered by Mayor and City Council at 10 A. M. February 21, for paving with asphaltic macadam wearing surface made of Harjo gravel and Bermudez asphalt, grading, etc., W. 23d St. from Classen Blvd. to Ames Ave.; width 26 feet; plans and specifications on file in office of City Clerk; certified check, 3 per cent. of bid.
- Paving.**—City of Eutaw, Ala., will receive bids until 2 P. M. February 27 for construction of 800 square yards tar-cap macadam street paving, 2850 linear feet cement curbing, 2150 square yards cement sidewalks; certified check, \$250. For information as to plans and specifications address John W. Cook, Mayor.
- Piping.**—City of Luray, Va., will require 5000 feet of 6-inch and 13,400 feet of 4-inch C. I. pipe. Address S. O. Judd.
- Piping, etc.**—Baltimore (Md.) Board of Awards will receive bids at office of J. Sewell Thomas, City Register, City Hall, until 11 A. M. February 23 for installing water piping and steam-heating apparatus in sewage pumping station, sanitary contract No. 64, as shown on plans on file in office of Calvin W. Hendrick, chief engineer Sewerage Commission, 904 American Bldg.; charge of \$2.50 for each specification and blueprints; certified check, \$350; W. D. Platt, chairman pro tem. Sewerage Commission; Harry W. Rodgers, secretary.
- Planing Mill.**—E. S. Johnson, Edgefield, S. C., will want prices on planing mill.
- Power Plants.**—See "Machinery and Equipment."
- Printing Machinery.**—Port St. Joe Company, J. C. Van Riper, president, Port St. Joe, Fla., wants prices on printing machinery.
- Pipe.**—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want 200 or 300 feet 8-inch spiral pipe with flange joints; also several 45 and 90-degree Ls; good condition.
- Poultry Feed.**—Balfour Quarry Co., Asheville, N. C., wants addresses of manufacturers of poultry feed.
- Pumps.**—See "Hardware, etc."
- Pumps.**—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., want two 8-inch centrifugal pumps; direct connected; good condition.
- Pump Pits, etc.**—J. H. Dingle, City Engineer, Charleston, S. C., will receive bids until noon February 29 for construction of pump pits and appurtenances for sewerage system; plans and specifications furnished on deposit of \$10.
- Punch and Shear.**—Withers Foundry and Machine Works, Empire Bldg., Atlanta, Ga., wants (for jobbing shop) new or second-hand punch and shear to punch ¾x1-inch hole through 1-inch plate, shear 1½-inch round.
- Rails.**—Boone County Flour Mills, Petersburg, Ky., wants prices on about 500 feet second-hand light rail for coal elevator track.
- Rails, etc.**—Marston Cooperage Co., O. B. Guinn, president, Marston, Mo., wants prices on steel rails and splices for five miles of tram standard-gauge road.
- Rails.**—V. H. Kreighshaber, chairman, Forsyth Bldg., Atlanta, Ga., wants (for Brookhaven Country Club) about 2½ miles 80 to 90-pound second-hand T rail.
- Rails.**—See "Miniature Railroads."
- Rails, etc.**—American Metallic Packing Co., Lexington, Ky., wants five miles 54 to 63-pound steel relayer rails and splices; Tennessee delivery; give location.
- Railroad Equipment.**—See "Machinery and Equipment."
- Road Construction.**—Board of Public Roads, W. A. Harris, secretary, Spotsylvania, Va., will receive bids March 6 for construction of one and three-quarter miles of macadam roads from Spotsylvania to Galye's bridge; material to be furnished by county; A. F. Brown, engineer in charge, Fredericksburg, Va.
- Road Construction.**—Talbot County Commissioners, Easton, Md., and Caroline County Commissioners, Denton, Md., will receive bids until noon February 27 for grading and macadamizing about .83 mile of Dover Bridge Rd.; work includes pivot drawbridge and 70-foot steel span over Choptank River, together with necessary piers, abutments, fender work, etc.; plans and specifications on file in office of County Commissioners at Easton and Denton, Md.; proposals to be made on forms furnished by State Roads Commission, to be obtained through its office in Baltimore, Md.; each bid to be accompanied by certified check for \$200; Joseph B. Harrington, clerk Talbot County Commissioners, Easton, Md.; William H. Anderson, clerk Caroline County Commissioners, Denton, Md.
- Road Machine.**—A. N. Gorenstein, clerk Board of Road Commissioners, Guyton, Ga., wants prices on 10-ton road-packing machine of 25 horse-power; gasoline preferred to steam.
- Roofing.**—C. H. Ruggles, Tuscaloosa, Ala., wants asbestos roofing.
- Seating.**—C. P. Regier, Route 8, Enid, Okla., wants prices on benches for \$500 church.
- Seating.**—Elm Ave. Methodist Episcopal Church South, Rev. W. G. Bates, chairman building committee, Portsmouth, Va., will want seats for \$1500 edifice.
- Sewer Construction.**—Board of Public Improvements, Room 300 New City Hall, St. Louis, Mo., will receive bids until noon February 17 for construction of sewers in Baden Sewer District No. 1; plans, specifications, form of bid and other information can be had at office Board of Public Improvements.
- Sewer Construction.**—Baltimore (Md.) Board of Awards will receive bids at office of J. Sewell Thomas, City Register, City Hall, until February 23 for construction of sanitary lateral sewers in District No. 15, as shown by plans on file in office of Calvin W. Hendrick, chief engineer Sewerage Commission; specifications and plans can be obtained on application at office of Sewerage Commission, 904 American Bldg.; charge of \$5 for each specification and blueprints; certified check, \$3000. Approximate quantities: 35,000 linear feet terra-cotta pipe sewer, 8 to 15 inches diameter; 9000 linear feet 6-inch terra-cotta house connections. W. D. Platt,

chairman pro tem. Sewerage Commission; Harry W. Rodgers, secretary.

Sewer System.—See "Water-works and Sewer System."

Soda Fountain.—Dr. J. E. Adams, Boyle, Miss., wants prices on soda fountain.

Steel and Iron.—See "Building Materials, etc."

Store Fronts.—See "Doors and Windows."

Steel Furniture.—Board of County Commissioners, R. G. Johnson, chairman, Leon county, Florida, will receive sealed bids on or before 10 A. M. April 4 for furnishing steel furniture for County Judge's office according to specifications on file with Clerk of Circuit Court at Tallahassee, Fla.; all bids to be filed with H. T. Felkel, clerk of board; usual rights reserved.

Steel Beams.—See "Building Materials."

Stoves.—See "Mail-order Goods."

Tile and Marble Work.—Ocala National Bank, Ocala, Fla., wants bids on tile and marble work for \$25,000 bank building; plans obtainable after February 18 from W. B. Camp, architect, Jacksonville, Fla.

Toys.—See "Mail-order Goods."

Tackle Blocks.—Bryan & Co., Phelps St., between Ionia St. and Railroad Ave., Jacksonville, Fla., wants tackle blocks, etc.; good condition.

Telephone Equipment.—Office of Chief Signal Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until February 23 for furnishing miscellaneous lot of telephones, etc. Send for specifications.

Vacuum Massaging Machines.—W. H. Smith, Vernon, Tex., wants vacuum massagers; wants to correspond with manufacturers.

Vaults.—Treasury Department, office of Supervising Architect, Washington, D. C., February 6, 1911. Sealed proposals will be received at this office until 3 P. M. February 20, and then opened, for construction, complete, of money vault, stamp vault and plate vault for U. S. Bureau of Engraving and Printing building at Washington, D. C., in accordance with drawings and specifications, copies of which may be had at this office or at office of engineer and superintendent, Frederick S. Holmes, No. 2 Rector St., New York City, at discretion of Supervising Architect, James Knox Taylor.

Water-works.—City of Georgetown, Tex., R. E. Ward, Mayor, will receive new tenders February 21 for laying cast-iron pipe, furnishing hydrants and valves, concrete powerhouse and surface reservoir; F. H. Lancashire, engineer, Dallas, Tex.; former bids rejected.

Water-works and Sewer System.—Mayor and City Council, Rockmart, Ga., will receive sealed bids until 2 P. M. March 7 for machinery, material and construction of water-works and sewerage systems; plans may be seen at office of I. F. Mundy, Mayor, and engineer, J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga.; proposal forms, specifications, etc., may be had from either; each bid must be accompanied by certified check for 5 per cent. of amount of bid; usual rights reserved.

Wire.—Office of Chief Signal Officer, Capt. A. S. Cowan, disbursing officer, War Department, Washington, D. C., will receive bids until 11.30 A. M. February 27 for furnishing 300 miles of wire, field, 11-strand, in accordance with specifications Nos. 402-A, 406-A, 414-A and drawing No. 106; to be furnished on spools in lengths of 3640 feet; spools to be furnished by Signal Corps; send for specifications.

Wharf Construction.—Board of Commissioners, Port of New Orleans, Suite 200, New Orleans Court Bldg., New Orleans, La., will receive bids until 7.30 P. M. February 21 for construction of wharf in front of Immigration Station, right bank of Mississippi river; material to be furnished by Board; deposit, \$500; payments, 80 per cent. annually; plans, specifications, proposal forms, etc., on file in office of engineer, A. C. Bell, Suite 200, New Orleans Court Bldg., by whom full sets will be furnished on deposit of \$15; Hugh McClosky, president of Board.

Woodworking Machinery.—W. C. Meredith, care of Southern Wood Preserving Co., Atlanta, Ga., wants woodworking machinery, including borer, planer, shaper, mortise and tenon machine; for manufacturing cross-arms and wood-pipe conduit.

Woodworking Machinery.—Thomaston Ice Co., Thomaston, Ga., wants prices on woodworking machinery.

Woodworking Factories.—Western Hanger Co., Marinette, Wis., wants to correspond relative to placing order for manufacture of garment hangers; beech wood used.

Woodworking Machinery.—W. J. Francis,

general delivery, Windsor, N. C., wants prices on veneer lathe, clipper, haul-up rig, drag saw, glue spreader.

INDUSTRIAL NEWS OF INTEREST

"Detroit-Fenestra" Windows at Cement Show.

Solid steel "Detroit-Fenestra" windows will be exhibited at the Chicago Cement Show, space No. 277, February 17 to 23, by the Detroit Steel Products Co. of Detroit, manufacturer of these windows.

Pawling & Harnischfeger at New Orleans.

The Pawling & Harnischfeger Company of Milwaukee, builder of cranes, hoists, etc., announces the establishment of a branch office at 533 Baronne St., New Orleans, La., under the management of T. W. Waddell.

Replacing Steam by Gasoline Power.

Believing that gasoline-power will meet his requirements better than steam-power, C. W. Rich, who conducts a blacksmith shop at Newell, N. C., is replacing his steam plant with gasoline-power. The Galloway Company of Waterloo, Ia., supplied the gasoline engine.

Elevator for City Hall at Louisville.

After some interesting competition the American Machine Co., Louisville, Ky., secured the order for the passenger elevator in Louisville's City Hall. It will have a capacity of 2500 pounds, speed 250 feet per minute, full magnetic control. The car will travel from the basement to the third floor.

Takes Over Plumbing Company.

The J. J. Breen Company of Charlotte, N. C., has taken over the Piedmont Plumbing Co. and will hereafter conduct the business under the firm name of the Breen-Tompkins Company at 11 W. 5th St., the present location of the Breen Company. Officers of the new company will be J. J. Breen, president and general manager, and S. A. Tompkins, formerly of the Piedmont company, secretary and treasurer.

Completes Addition to Its Plant.

The Boston Incandescent Lamp Co., manufacturer of the well-known Boston renewed lamp, has recently completed an addition to its plant at Danvers, Mass. This addition was made necessary by the rapidly increasing demand for the company's lamps, and covers a ground area of 80x35 feet. It is two stories high.

Establishes Fort Worth Office.

In view of the rapid growth of Texas and its increasing consumption of coal, the Rock Island Coal Mining Co., State National Bank Bldg., Oklahoma City, has established an office at 400 Cotton Exchange Bldg., Fort Worth, in charge of D. B. Mikesell, division sales agent. This company produces the well-known Alderson and Hartshorne coals and owns and operates seven mines from which its output is mined.

The Alberger Companies.

George Q. Palmer, formerly vice-president, has been made president of the Alberger Condenser Co. and the Alberger Pump Co., 140 Cedar St., New York. He is succeeded as vice-president of the Alberger Condenser Co. by D. H. Chester and of the Alberger Pump Co. by W. S. Doran.

Has Wire Nail Orders.

The Southern Iron & Steel Co. of Birmingham has recently shipped 599 tons of wire nails and has orders on file for 850 tons of that product. It finds the demand increasing and is prepared to enter further contracts for wire nails and other iron and steel manufactures in any quantity.

Bond & Bates Have Contract.

Bond & Bates, Baltimore, have contract for construction of a portion of the proposed sewer system for Brooklyn, Md. This firm was organized on January 1 to conduct a general contracting and engineering business, with offices at Pratt and President Sts., Baltimore. The plans for the sewer system mentioned were made by E. T. Hayman, engineer of Anne Arundel county at Annapolis, and he will have charge of the work.

President of Sewanee Company.

John E. Patton has been elected president of the Sewanee Fuel & Iron Co. of Chattanooga and has assumed active charge of the company's affairs. Mr. Patton is well known for his activity during the past two years in organizing and directing the Continental Coal Corporation, of which he was vice-president and general manager. He severed

Wrecking.—Westlake Construction Co., St. Louis, Mo., wants prices on wrecking. (See "Building Materials, etc.")

his connection with the latter company in order to become engaged with the Sewanee Fuel & Iron Co., which is marketing steam coal, blacksmith coal and coke.

To Manufacture Jaw and Friction Clutch.

The Positive Clutch & Pulley Works, temporary offices at 358 Elliott Square, Buffalo, N. Y., has incorporated for the purpose of manufacturing combined jaw and friction clutches and wood-rim split pulleys. Its factory is under construction, and equipment has been purchased with a view to beginning operations by April 1. Officers of the company are C. H. Hook, president; N. F. Beard, vice-president; E. L. Worbois, secretary, and S. A. Benedict, treasurer and manager.

Establishes Manufacturers' Agency.

H. W. Davant, P. O. Box 93, Roanoke, Va., has established a manufacturers' agency for the sale of machinery and equipment and desires to make agency arrangements with manufacturers who desire representation in Virginia and surrounding territory. Mr. Davant will make a specialty of railroad equipment, contractors' equipment, furnace and mine equipment, power plants, etc., and desires especially to secure a good line of engines and boilers, gasoline engines, gas-engine producers and machine tools.

Burnite Roofing and Siding.

Made with two storm-resisting and fire-retarding surfaces—bird-sand and "Twolayr" slate chips of attractive, permanent, natural slate colors, i. e., slate-red and Stoddard slate-green—it is claimed that Burnite roofing is sold on its merits and lasting qualities. The uniform solid slate surface of this roofing (which may also be used for siding and other purposes) requires no painting, and is kept bright and clean by the rain. Burnite products are manufactured by the Birmingham & Seaman Company, general offices, 1208-1228 Tribune Bldg., Chicago.

Contracts for J. S. Schofield's Sons Company.

Important contracts recently secured by the J. S. Schofield's Sons Co., Macon, Ga., through C. D. Loane, the company's agent in Charlotte, N. C., include the erection of a 100-foot self-supporting steel stack and the installation of an 84-inch by 18-foot horizontal return tubular boiler for the Hygeia Ice & Fuel Co., Spartanburg, S. C. The company is also erecting for the Mayo Cotton Mills at Mayodan, N. C., a standpipe 64 feet high by 20 feet in diameter, and one of the same dimensions for the Henrietta Cotton Mills at Caroleen, N. C. It is also erecting a 25,000-gallon tank on a 50-foot tower for the Forrest Furniture Co., North Wilkesboro, N. C.

John W. Maxey, Consulting Engineer

John W. Maxey of Houston, who has long been identified with various engineering enterprises, announces that he will confine his efforts to civil engineering, and to this end will act as consulting engineer, designer and supervisor of water-works, sewers and sewage-disposal plants, public highways and paving. He states that his services will be given in his individual capacity solely, and that he will only accept commissions for engineering services to which he can devote his personal attention, thus assuring the proper and accurate dispatch of all business entrusted to him.

To Sell Knoxville Woolen Mills.

In order to retire from business and convert their manufacturing properties into cash, the stockholders of the Knoxville Woolen Mills have authorized the unrestricted sale of their properties at public auction upon the premises at Knoxville, Tenn., on March 1 and 2. The sale will begin at 10 A. M. each day, and will be made in lots to suit purchasers, the name and good-will of the business to be included. The properties embrace four manufacturing realities, mill site (brick buildings) 400x180 feet, and a manufacturing property with water-power privilege (at Sanford); more than 150 lots of machinery, mechanical equipment, electric motors, generators, large and small steam engines, etc. For fuller details address J. E. Conant & Co., auctioneers, Lowell, Mass., who will conduct the sale.

Randall-Lovegrove-Wyman.

Fred C. Randall, W. H. Lovegrove and M. A. Wyman have organized as Randall-Love-

grove-Wyman, with offices in First National Bank Bldg., Houston. They are graduate engineers and have had practical experience in the operation of power plants. The firm will give attention to electrical and hydraulic engineering, and will act in an advisory capacity for the management and installation of power plants. It will furnish plans complete and act as a general consulting engineer, besides dealing in the necessary machinery, engines, boilers, heaters, feed-water regulators, air compressors, etc. The firm has an agency for the Franklin water-tube boiler, the Sims heater, hot-water generator and purifier, the Brownell engine and boiler, the Cope feed-water regulator and pump governor, etc. Its field of activity thus includes designs, examinations, reports of inspection, construction, operation and management of light, power, railway, refrigeration, irrigation and industrial plants.

Locomotive and Car Plant for Sale.

In pursuance of an order in bankruptcy, William McInnes, trustee, will offer for sale at public auction on February 21 at the door of the Courthouse, Chicago, Ill., the properties of the Hicks Locomotive and Car Works at Chicago Heights, Ill. The assets to be sold include all the land owned and occupied by the company, in addition to machinery, tools, belting, motors, engines, iron, steel, lumber, locomotives, passenger cars, baggage cars, freight cars, car wheels, parts and accessories used in the manufacture of locomotives, cars, etc.; sundry securities, accounts and bills due the bankrupt, furniture, patterns, contracts, etc. Each bid is to be accompanied by a certified check for not less than 25 per cent. of the sum offered, and the right is reserved to reject any and all bids deemed inadequate. For detailed information address William McInnes, trustee of the Hicks Locomotive and Car Works in bankruptcy, Fisher Bldg., Chicago, Ill.

Cammell, Laird & Co., Ltd.

The Sheffield (England) firm of Cammell, Laird & Co., Ltd., has organized an American corporation known as Cammell, Laird & Co. of New York, for the purpose of handling the products of the company in this country. It has just been awarded a contract in England for building one of the \$10,000,000 British Dreadnaughts, and is building five other warships, and is considered one of the greatest steel works and shipbuilding companies in Great Britain. The company will occupy the entire new building at 34 Cliff St., New York, having been previously represented by Lionel Samuel as general agent in New York for several years at 25 Cliff St. It will carry a larger stock than ever of its specialties of English tool and "high-speed" steel, and will continue to increase its business with the South and Southwest, as well as with other parts of the country. Lionel Samuel is secretary, manager and a director of the new corporation, and is well known in New York, as well as in Mexico, Central and South American countries. The company will represent the allied interests, such as the Cyclops Steel and Iron Works of Sheffield, the Yorkshire Steel and Iron Works, the Grimsby Ordnance, Steel Tyre and Spring Works, and the shipbuilding works of the company at Birkenhead.

Special Display Eclipse Concrete Mixers.

The Chicago store and office of the Standard Scale & Supply Co., manufacturer of Eclipse low-charging concrete mixers, are located at 1345-1347 Wabash Ave., one square north of the Coliseum, where the Cement Show will be held. Because of this convenient location the company is making a special display of concrete mixers and will have several machines in operation at its store and warehouse and at the Cement Show. It will also have on display special mixers mounted for various kinds of work, including mixer with hoist for handling the mixed materials, mixer for discharging at rear end of truck for street-paving work, small-size machine especially adapted for sidewalk work and small jobs, also machine mounted on steel truck with steel house, etc. The particular feature of the Eclipse mixer is the low-charging open drum, and the machines in operation will enable visitors to see the process of mixing inside the mixer. The drums exhibited at the Cement Show will be attractively finished in white, as were the Eclipse mixers exhibited in New York and previous shows at Chicago. In addition to concrete mixers there will be on display at the company's store contractors' hoists, wheelbarrows, cages, trucks and scales. United States and foreign patents have recently been issued to M. H. Reed of the Standard Scale & Supply Co. on the low-charging arrangement used on Eclipse concrete mixers. These patents broadly cover

the use of overlapping blades or pockets at the charging end to feed the material to the interior of the drum when it is dumped over the low-charging chute. They also include either the open drum as now manufactured or the drum with the second head formerly used. Patent on the semi-automatic discharge device was issued some time ago.

Coal-Examining Specialty.

Frederick G. Clapp, consulting geological engineer, 331 Fourth Ave., Pittsburg, has added to his line of special work that of examining and reporting on coal, coal-mining properties, etc. C. V. Gould, mining engineer, graduate of the Armstrong College of Science, Durham University, England, and for 14 years expert in coal and iron mining in England and America, will be in charge of this branch of the work. This firm is now prepared to report on developed and undeveloped mining propositions in any part of the world, make explorations, maps and surveys, examinations of mineral lands, with specialties in oil, coal and gas producing properties, and will undertake the development and management of the same.

To Make Flexible Hose.

The Dickson Flexible Metallic Hose Co. of Houston has organized with \$200,000. Its officers are: President, R. C. Duff; vice-president, Henry Dickson; secretary and treasurer, George N. Dickson; general manager, Charles K. Rein. This company owns the patents on a flexible metallic hose, which is especially adapted for connections between locomotives and cars, and will first attempt to supply the hose for air, steam and signal purposes and for the feed hose for oil-burning locomotives. The device consists of a series of movable joints made in eight-inch sections, with a swivel at one end to allow of the freest possible motion in accord with the motion of the cars. The hose is made in M. C. B. lengths and with M. C. B. couplings, so it is thoroughly interchangeable with rubber hose now in use. It will be manufactured under contracts by various malleable iron works throughout the country. Practical tests have been given for seven months on Southern Pacific cars, these models having been manufactured at the Southern Pacific shops. When removed and taken apart after seven months' use there was no evidence of wear. To show the flexibility of the device it is instanced that one of the metallic hose couplings connecting an engine and car was in a wreck recently in which the engine and car upset and turned over on one side, and yet the hose was not disconnected.

TRADE LITERATURE.

Highway Improvement News.

Beginning with its February number, which has recently been issued, the Dixie Corrugated Culvert & Metal Co. of Little Rock, Ark., and Atlanta, Ga., has begun the publication of Highway Improvement News. This publication will be issued monthly, and should be of value and interest to road builders and road users.

Farm Cement News.

The Farm Cement News, a periodical devoted to the use of concrete on the farm, has been issued by the Universal Portland Cement Co., 115 Adams St., Chicago; Brick Bldg., Pittsburg, and other cities. This publication is illustrated and deals with masonry walls, surface treatment, cement-plaster construction, concrete, brick and slab walls, etc.

Waverly Warehouse Stock List.

Stock list No. 6 of the Carnegie Steel Co.'s Waverly warehouses at Newark, N. J., contains complete dimensions of sections carried in stock, with coloword for ordering, stock lengths, sectional areas and weights per foot of material, etc. It is stated that sections listed are carried in stock at all times, and can be shipped immediately, either in stock lengths or cut to desired lengths. Attention is called to the advantageous location within a short distance of many railroads, insuring prompt delivery. Address the Carnegie Steel Co. at Newark, unless a district office is nearer.

The Tesco Products.

Tesco products, including flooring, marble and tile, have been subjected to severe tests, not only in the laboratories where they are manufactured, but in practical uses in restaurants, bathrooms, vestibules, theaters, residences, etc. It is claimed that Tesco marble perfectly imitates any kind of marble, possessing the appearance, hardness and tensile strength of the natural product and having absolute control of veining and harmony of colors. Tesco products are manufactured by

the Tesco Products Co., Milwaukee, Wis., and are illustrated and described in a booklet which the company has issued.

Soule Steam Feed Works.

The Soule Steam Feed Works of Meridian, Miss., designs and builds all kinds of special sawmill machinery, including Soule steam feeds, rope-drum outfits, simplex edge lumber stackers, flat lumber stackers, St. Bernard sawmill dogs, power timber handlers, steam windlasses, lumber buggies, rack gearing, etc. The company has issued a catalogue of 61 pages describing and illustrating its machinery. List prices, with dimensions, are stated for each item of machinery; also instructions for setting and operating the steam feed machines, with suggestions as to their care and the use of oil. The company is also prepared to build machinery to order.

Browning Piledrivers.

The Browning Engineering Co., Cleveland, has issued a descriptive catalogue of Browning piledrivers, in which are shown several full-page illustrations of the railroad pile-driver, besides interesting photographic illustrations of wrecking cranes, revolving steam shovels and locomotive cranes. The Browning piledriver is of the revolving type, steam driven, self propelling at the rate of six miles per hour, and capable of making three revolutions per minute. It can be used to drive piles on a batter up to three inches to the foot, and is readily lowered into a horizontal position on the car for transportation with all its movable parts locked in position.

Central Battery Telephone Sets.

Bulletin No. 1117 of the Western Electric Co., New York, and Hawthorn, near Chicago, illustrates and describes desk and other telephone sets using central battery service, and details the various parts and accessories of this company's telephone manufactures. Signaling systems are described, including the four-party semi-selective ringing system, by means of which any desired bell of the party line may be rung without disturbing the remaining bells. Special conditions not covered by the instruments of this bulletin, such as mines, railways, etc., will be treated specifically by the company on application from parties desiring such instruments or information regarding them.

Safety Heating and Lighting.

The Safety Heating and Lighting News is a monthly periodical published by the Safety Car Heating & Lighting Co., 2 Rector St., New York. Its February issue contains an exposition of the use of carburetor gas with a lamp modified to use the Pintsch mantle. The advantage of these lamps is that by using the overhead carburetor system and a Pintsch mantle an ideal car-lighting system is provided for branch railways not having access to terminals where Pintsch gas can be obtained. A detail illustration of this modified lamp is given. An illustrated article on hot-water heaters is also given. New electric deck lamps and an illustration of Pintsch mantle lighted buoys are shown.

Hill Clutch Co.

Catalogue No. 9 of the Hill Clutch Co. of Cleveland is a cloth-bound book of 34 pages of illustrations and descriptive data pertaining to the various power-transmitting equipments manufactured by this company. Numerous tables for use in ordering and of other information are given. The line of power-transmission machinery includes shafting, safety collars, couplings, bearings of all kinds, drop hangers, friction clutches, cut-off couplings, quill and hollow-shaft installations, cast-iron pulleys, belt tighteners, adjustable belt carriers, manila-rope transmission equipment, wire-rope transmission sheaves, harness equipment for water-wheels, and all kinds of sprocket and gear wheels, cut, machine molded and pattern molded.

Estey Wire Products.

To most people the term "wire works" suggests something more or less crude and unsubstantial, offering little opportunity for the execution of artistic and attractive designs. In catalogue 19, however, issued by the Estey Wire Works Co., whose offices and salesroom are at 59 Fulton St., New York, the company has endeavored to indicate the wide range embraced in its products and to show actual examples of its work. This company manufactures bronze, brass and iron work for banks, offices, etc., and also all grades of wire cloth, netting, wire goods, double-crimp mining cloth and spiral netting. It was established nearly 35 years ago and has excellent facilities for the manufacture of its products. Catalogue No. 19, which is attractively illustrated, is devoted to wire work, while catalogue No. 20 deals with wire cloth.

Brick-Making Machinery.

J. C. Steele & Sons' (Statesville, N. C.) catalogue No. 11 contains descriptions and illustrations of this firm's "New South" brick-making machinery, also instructions as to the best methods of making bricks with its machinery by the stiff-mud process. Special attention in the manufacture of these machines has been given to their application to Southern clays. They are made in several sizes with capacities from 600 up to 10,000 or more per hour. The machinery is also illustrated and described, and the various lift cars, dump cars, elevators, drier cars, pug mills, etc., as may be needed in connection with the manufacture of bricks and tiles. This firm has been engaged in brick-machinery manufacture for 22 years, and now the factory buildings cover four acres of ground and contain over 30,000 square feet of floor space. The works and demonstrating brick-making plant adjoining are operated by electric-power.

"Graphite" for February.

"Graphite" is a monthly publication issued by Joseph Dixon Crucible Co. of Jersey City in the interest of Dixon's graphite productions and for the purpose of establishing a better understanding in regard to the different forms of graphite and their respective uses. The February issue contains a description of proper treatment of boats' bottoms with powdered graphite or plumago, especially for racing purposes with sail or power boats, and it may be added that the treatment is proportionately still more efficacious for smaller boats racing with oars. Illustrations of structures in which Dixon's graphite paints were used are shown, also a letter from the driver of a racing automobile, in which he states that the tires held up 50 per cent. better when treated with graphite, for the reason that it kept them dry in wet weather, and the graphite working into the pores made punctures less likely to occur. The letter states that the writer has driven 10,000 miles without a puncture with graphite on the tires.

Triumph Transformers.

Bulletin No. 451, issued by the Triumph Electric Co., Cincinnati, illustrates and describes Triumph transformers for power and lighting. These transformers are known as Triumph Type L and are of the pole type construction. They are constructed for single-phase circuits and for all standard voltages and frequencies. Particular attention has been given to the relative values of the materials used, as a disproportionately low core loss, it is said, will produce excessive copper loss and poor regulation. Similarly, unnecessary insulation is said to be directly responsible for high reactance, poor regulation and a tendency to overheating, the efficiencies being correspondingly low. In the Triumph design it is claimed that these defects have been carefully guarded against.

Seranton Upright Power Hammers.

E. R. Caldwell & Co., 34-36 Hilton St., Bradford, Pa., have taken over the manufacture and sale of the Seranton upright power hammers formerly manufactured by Seranton & Co. of New Haven. They invite correspondence from parties desiring new hammers or information concerning those previously manufactured. Special circular No. 46 from this company describes and illustrates the improved hammer, presenting its particular advantages, table of capacities, list of users and many testimonials recommending it. That the manufacture and sale of this hammer has been assumed by the firm is stated in a special announcement, which adds that, with adequate foundry and machine-shop facilities, Caldwell & Co. are prepared to promptly meet increasing demands for this well-known machine.

Heating Values of Coal.

During the past six years, when the fuel-testing plant at the St. Louis Exposition was put into operation, the United States Geological Survey has sampled, tested and analyzed many different grades and qualities of coal from mines in different localities. The results of this work have been published in numerous voluminous reports and bulletins containing full and detailed information regarding the methods used and the results obtained from different grades of coal. Locomotives burn approximately 100,000,000 tons a year, or one-fifth of the total amount of coal mined annually in the United States. The data contained in these reports is therefore interesting and useful to readers of the American Locomotive Co.'s bulletins. For this reason, and with the permission of the directors of the United States Geological Survey, portions of the reports are presented in a condensed pamphlet form, known as bulletin No. 1006, copies of which can be ob-

tained from the American Locomotive Co., 30 Church St., New York.

Castings for Sewers, Water and Street Lighting.

A catalogue presenting interesting illustrations with comprehensive descriptive data of castings for sewer, water and street-lighting purposes has been issued by the Murray Iron Works Co., Burlington, Ia. It tells of the Murray sanitary catch basins, constructed of common brick or concrete, and provided with capstones to receive the cast-iron cover frame, giving an opening large enough to allow a man to stand in the catch basin and shovel out the dirt, while the two cover plates are small enough to be handled easily by one man. The perforated plate is set across the basin at the bottom opposite the gutter inlet, to stop all dirt carried in by the water which drains through the holes, and the dirt is then shoveled out. Murray sanitary sewer outlet boxes are designed to be placed at the sewer-pipe opening in a catch basin to close this opening and stop the odors which become so disagreeable after dry weather and to prevent water and sewage backing up in wet weather when the sewer becomes choked or flooded. In addition to the castings described in the catalogue, the Murray Iron Works Co. also manufactures engines and boilers for municipal light and power plants and high-duty pumping engines for water-works.

Rock Drill Mountings.

Pamphlet No. 9033 of the Ingersoll-Rand Company, 11 Broadway, New York, presents the standard line of Ingersoll-Rand drill mountings, air and steam hose, drill steels and other accessories usually entering into a complete rock-drilling equipment. It also gives tables of sizes, weights, prices, code name, etc., of the equipment described and illustrated. It is stated that the company's effort has been to produce a consistent line of drills, mountings and accessories to supplement the high-class drilling machines supplied. Illustrations and descriptions are given of drills mounted on a column, mounted on tripod, quarry bar and "gadder," together with a statement of the uses and advantages of each. Specially made steam and air hose from three-quarters to three inches in diameter and the hose couplers and menders are described; also the various standard Ingersoll-Rand blacksmith tools, the "New Ingersoll" throttle, and others, sand pumps and manifolds for hose lines, and the Moran flexible-pipe joint. A specially prepared article on the selection and treatment of bits, covering eight pages of the pamphlet, should be of particular interest to those engaged in mining.

Developing Texas Orchard Land.

The Gulf States Development Co. of Houston contemplates the immediate development of 2400 acres of land 32 miles south of Houston, on the St. Louis, Brownsville & Mexico Railroad, adjoining the town of New Liverpool. This company purchases the land and guarantees to set it out in Satsuma orange and magnolia fig trees. A contract has been made with the New England Co-operative Orange Orchard Co. for the purchase of the land when completely developed. It is proposed to carry forward the development as rapidly as possible, and it is the expectation that the entire tract will be sold to New England purchasers. The development company will provide drainage and irrigation, and, if desired, will undertake the management of the entire tract. Purchasers of tracts, however, will be allowed to locate on the property at any time on completion of purchase. Literature has been issued descriptive of operations which have been successfully undertaken in Satsuma orange-growing and fig-raising here, as well as in the cultivation of pecans. It is the expectation that the tract will be taken up without much delay. The Gulf States Development Co. has further plans for the acquisition of additional acreage, with possible bases of operations in other parts of the United States, with units of about the same size as the New England Orange Orchard Co. has taken over.

Avery Commercial Trucks.

The practicability of employing motor trucks for commercial purposes has been so thoroughly demonstrated that a recital of general reasons why they will reduce the cost of hauling as compared with the use of horses seems unnecessary. Briefly stated, their advantages consist of speed, capacity, ability to run all day and any number of hours overtime, not being subject to fatigue and not requiring feeding or constant attention. Referring particularly to Avery trucks, it is claimed that the motor used was designed by a man who has had years of ex-

perence not only in the manufacture of automobiles, but other machinery as well. The motor is of the four-cylinder four-circle type, its location on the truck making it extremely accessible. A selective sliding-gear type of transmission is used, which is simple in construction, easy to change and silent in operation. The brake is of the internal expanding type and so attached to each rear wheel as to easily hold the truck on the steepest grades. The rear axle is 2 3/4-inch cold rolled steel, while the front axle is of double special alloy steel bars with drop forged knuckles. Avery trucks are regularly furnished with solid rubber tires, and can also be supplied with wheels having cast-steel rims and hardwood plug tires. These trucks are manufactured by the Avery Company, factory and general office at Peoria, Ill., and are comprehensively described and illustrated in a catalogue which the company is distributing.

Literary Notes.

Analysis of Paints, and Painting Materials. By Gardner and Schaeffer. Publisher, McGraw-Hill Book Co., New York. Price \$1.50.

The necessity of accurately determining the quality of ingredients used in paint manufacture, as well as the quality of the commercial paint for use under various requirements, calls for standard means of testing, which the authors of this book have carefully presented.

Of the authors, Henry A. Gardner is director of the scientific section of the Paint Manufacturers' Association of the United States, and John A. Schaeffer is instructor in chemical practice at the Carnegie Technical Schools, Pittsburg. The book should prove of particular value to paint manufacturers and also large dealers in paints, where extensive testing by a more or less expert practical chemist is necessary to insure the products against the great temptation in this industry for adulterations; also for standard testing where specifications must be fulfilled.

The authors state that it is assumed the reader is well versed in the ordinary qualitative methods used in analytical chemistry, but from the general information contained it should also prove of value to all those engaged in the manufacture or use of paint and painting materials.

Cambria County Pioneers. A Collection of Brief Biographical and Other Sketches Relating to the Early History of Cambria County, Pennsylvania. By James M. Swank, secretary and general manager of the American Iron and Steel Association, 261 S. 4th street, Philadelphia. Price \$2.50.

Cambria county was among the pioneers in iron manufacture in this country, and was in other ways an important contributor to the making of American history. From time to time in the past 30 years Mr. Swank, who is the author of a history of the manufacture of iron in all ages, and of other historical works, has published biographical and other sketches relating to the history of Cambria county under the conviction that the names and work of pioneers of any community should never be forgotten. These sketches have been gathered into this attractive volume.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,
Baltimore, Md., February 15.

The Baltimore stock market continued active during the past week, with particular interest in Consolidated Gas, Electric Light & Power stock and bonds, which advanced with considerable trading. In the

dealings the common stock sold from 77 to 87, with last sale at 86, and the preferred rose from 94 1/2 to 98. The 4 1/2 per cent. bonds advanced from 86 1/4 to 87 3/4, with last sale at 87 3/4, while the notes sold at 90 1/2 to 99 3/4. United Railways common was traded in at 17 to 17 1/2; do. trust certificates, 17 to 17 1/2; do. incomes, 62 to 62 3/4; do. funding 5s, 85 1/2 to 86; do. do. scrip, 85 3/4 to 86; United 4s, 84 1/4 to 84 3/4; United Electric Light & Power 4 1/2s, 92 1/2; Consolidated Gas 4 1/2s, 96 to 96 3/4; Seaboard Air Line preferred, 36 1/4 to 36 3/4; Seaboard Company common, 24 to 23 1/2; do. second preferred, 48 3/4 to 48 1/4; Seaboard 4s, stamped, 87 1/2 to 87; do. three-year 5s, 100 1/2; do. 10-year 5s, 100 1/4; do. adjustment 5s, 76 to 76 1/4; Mt. Vernon-Woodberry Cotton Duck 5s, 74 1/2 to 73 3/4; G.-B.-S. Brewing 1sts, 46; do. incomes, 7 1/2.

Bank stocks sold as follows: Bank of Commerce, 30 1/4 to 31; Western, 37 1/2; Mechanics', 28 1/2; First National, 146; Baltimore Trust sold at 165; Maryland Trust preferred, 104 1/2 to 105; United States Fidelity & Guaranty, 163 to 167 1/2; Union Trust, 70 1/4; Fidelity & Deposit, 158 1/2 to 158; American Bonding, 78 1/2; Mercantile Trust, 144 to 144 1/4.

Other securities were traded in thus: Atlantic Coast Line Consolidated 4s, 94; do. convertible debenture 4s, 97 1/4; do. Connecticut 5s, certificates, 104; Atlantic Coast Line stock, 122; do. Connecticut, 230; Columbia & Greenville 1sts, 106 1/2; Metropolitan (Washington) 5s, 107 to 106 3/4; Milwaukee Railway & Light refunding 4 1/2s, 93 1/4; North Carolina 6s, 112; Seaboard & Roanoke 5s, 106 3/4; Baltimore Electric 5s, stamped, 89 1/2 to 90 1/4; Georgia & Florida 5s, 81 1/2 to 82; do. stock, 10; do. do. preferred, 18 to 19; Minneapolis Street Railway and St. Paul City Railway joint 5s, 104 1/2 to 104 3/4; Houston Oil preferred, 45; Maryland Electric 5s, 97 1/2; Saginaw Valley Traction 5s, 1920, 98 1/4; Charleston Consolidated Electric 5s, 96; Baltimore City Passenger 5s, 100 1/4; Virginia Midland 2d, 100 1/4; do. third, 106 1/2; do. 4th, 104 1/4; Anacostia & Potomac 5s, guaranteed, 103; Detroit United 4 1/2s, 81 to 82 3/4; Western Maryland 4s, 86 1/2 to 86 3/4; Consolidation Coal, 102 to 103 1/2; Fairmont & Clarksburg Traction 5s, 98 1/4 to 99; do. preferred, 75 to 78; Northern Central Railway stock, 125 to 126; Baltimore, Sparrows Point & Chesapeake 4 1/2s, 96; Carolina Power & Light 5s, 92 1/2; Norfolk & Portsmouth Traction 5s, 83 to 85; do. new common stock, 32; Norfolk Railway & Light 5s, 98 3/4 to 99 1/2; do. common stock, 22 1/2; Chicago Railway 5s, 1927, 98; Somerset Coal equipment 5s, 1914, 100; Coal & Iron Railway 5s, 101 1/4; Alabama Consolidated Coal & Iron 5s, 85 to 84 1/2; Baltimore City 5s, 1916, W. L., 103 1/2; Memphis Street Railway 5s, 97 1/2 to 97; Atlanta Consolidated Street Railway 5s, 104 3/4; Consolidation Coal refunding 4 1/2s, 93 1/4; Fairmont Coal 5s, 97 1/2 to 97 1/4; Jamison Coal & Coke, George's Creek 5s, 91 1/2 to 92; Georgia Southern & Florida 5s, 106 1/2; Georgia, Carolina & Northern 5s, 105 3/4; Carolina Central 4s, 92; Consolidation Coal receipts, 25 per cent. paid, 27 to 28; Georgia & Alabama Consolidated 5s, 104 1/2 to 104 3/4; West Virginia Central 6s, 100 3/4; Pennsylvania Water & Power 1st 5s, 86; Baltimore City 4s, 1960, 102; Charleston & Western Carolina 5s, 103 3/4; Anacostia & Potomac 5s, 100 3/4.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended February 15, 1911.		
Railroad Stocks.		
	Par.	Bid. Asked.
Atlantic Coast of Conn.	100	228 255
Charleston Consolidated	50	32
Fairmont & Clarks. Trac. Com.	100	30
Fairmont & Clarks. Trac. Pfd.	100	76 79

Georgia Sou. & Fla. 2d Pfd.	100	70 73 1/2
Maryland & Pennsylvania	100	22 25
Norfolk Railway & Light	25	23 1/2
Seaboard Co. Common	100	23
Seaboard Co. 1st Pfd.	100	81
Seaboard Co. 2d Pfd.	100	48 48 1/2
United Ry. & Elec. Co.	50	17 1/2 17 3/4

Bank Stocks.		
Bank of Baltimore	100	150 150 1/2
Bank of Commerce	15	30 31
Citizens'	10	41 1/2 43
Commercial & Farmers'	100	110
Exchange	100	161 166
First National	100	145 147
Howard	30	42
Marine	10	13 1/2
Maryland	20	24 1/2
Mechanics'	10	29
Merchants'	100	182
Union	100	130 133
Western	20	38 1/2

Trust, Fidelity and Casualty Stocks.		
American Bonding	25	78 1/2
Baltimore Trust	100	164 165 1/2
Continental Trust	100	207 208
Fidelity & Deposit	50	157 1/2 159
Fidelity Trust	100	218 221
Maryland Trust Pfd.	100	105 106
Maryland Casualty	25	97 1/2
Mercantile Trust & Deposit	50	144 144 1/2
Union Trust	50	70 1/2
U. S. Fidelity & Guaranty	100	163 165

Miscellaneous Stocks.		
Ala. Con. Coal & Iron	100	30
Ala. Con. Coal & Iron Pfd.	50	57
Con. Cotton Duck	100	50
Con. Gas, Elec. Lt. & P. Com.	100	88
Con. Gas, Elec. Lt. & P. Pfd.	100	97
Consolidation Coal	100	102 1/2 103 1/2

Railroad Bonds.		
Atlantic Coast 1st 4s	94	95
Atlantic Coast Conv. Debent. 4s	97	98 1/2
At. Coast (Conn.) 4s, Cfs.	5,200	92
Atlantic Coast (Conn.) 5s, Cfs.	104	104
Carolina Central 4s	92	92 1/2
Charleston & West Car. 5s	106 1/2	106 1/2
Coal & Coke Railway 5s	93	95 1/2
Coal & Iron Railway 5s	101	101 1/2
Georgia & Alabama 5s	104 1/2	104 1/2
Georgia & Florida 5s	81 1/2	82
Georgia, Car. & North. 1st 5s	105	105
Georgia Pacific 1st 6s	113	113 1/2
Georgia Southern & Fla. 1st 5s	105	106 1/2
Macon, Dublin & Savannah 5s	98	98 1/2
Maryland & Pennsylvania 4s	91	91
Piedmont & Cumberland 1st 5s	100	100
Potomac Valley 1st 5s	105	105
Raleigh & Gaston 5s	109	111
Savannah, Fla. & West. 5s	110	110
Savannah, Fla. & West. 6s	123 1/2	123 1/2
Seaboard Air Line 4s	87 1/2	87 1/2
Seaboard 4s, Stamped	89 1/2	87 1/2
Seaboard Adjustment 5s	76	76 1/2
Seaboard 10-year 5s	100 1/2	100 1/2
Seaboard 3-year 5s	100 1/2	100 1/2
Seaboard & Roanoke 5s	106 1/2	106 1/2
Seaboard & Roanoke 6s	100	100
Suffolk & Carolina 5s	98	100
Virginia Midland 2d 6s	100	100 1/2
Virginia Midland 3d 6s	100	100 1/2
Western Maryland 4s	85 1/2	86 1/2
Western N. C. Con. 6s	105 1/2	105 1/2
West Virginia Central 1st 6s	100 1/2	100 1/2
Winston-Salem S. Rd. 4s	95	96

Street Railway Bonds.		
Anacostia & Potomac 5s	100 1/2	100 1/2
Anacostia & Potomac 5s, Gtd.	107	107
Atlanta Con. Street Railway 5s	104 1/2	104 1/2
Baltimore City Passenger 5s	100	100 1/2
Balto. Sp. Pl. & C. 4s	96	96
Baltimore Traction 1st 5s	107	107
Charleston City Railway 5s	103 1/2	104 1/2
Charleston Con. Electric 5s	95 1/2	97
City & Suburban 5s (Balto.)	105 1/2	106
City & Suburban 5s (Wash.)	102 1/2	104
Fairmont & Clarksburg Trac. 5s	98 1/2	99
Knoxville Traction 5s	104	104
Lake Roland Elevated 5s	100 1/2	100 1/2
Lexington Railway 1st 5s	85	85
Macon Railway & Light 5s	95	96
Maryland Electric Railway 5s	97 1/2	97 1/2
Memphis Street Railway 5s	96 1/2	97 1/2
Metropolitan 5s (Wash.)	106	106 1/2
Norfolk & Portsmouth Trac. 5s	85	85 1/2
Norfolk Railway & Light 5s	99 1/2	100
United Railways 1st 4s	84 1/2	84 1/2
United Railways Income 4s	62 1/2	62 1/2
United Railways Funding 5s	85 1/2	86

Miscellaneous Bonds.		
Ala. Con. Coal & Iron 5s	84	85
Baltimore Electric 5s, Stp.	90	90 1/2
Consolidated Gas 4 1/2s	96 1/2	97
Con. Gas, Elec. Lt. & P. 4 1/2s	87	87 1/2
Con. Gas, Elec. Lt. & P. Notes	99	99 1/2
Consolidation Coal Refdg. 4 1/2s	94	94
Fairmont Coal 1st 5s	97	97 1/2
G.-B.-S. Brewing 1st 4s	45	46
G.-B.-S. Brewing Inc. 5s	71 1/2	71 1/2
Maryland Steel Co. 5s	101	101
Mt. Vernon-Woodbury Cot. Duck 5s	73 1/2	74
United Elec. Lt. & P. 4 1/2s	92 1/2	93 1/2

FINANCIAL CORPORATIONS.

Ala., Birmingham.—Official: The Co-operative Mortgage Co. incorporated; capital \$10,000; has begun with \$2500 paid in; to do a general real estate and loan business; Albert Lee Smith, president; W. H. Duke, vice-president, and David J. Davis, secretary and treasurer, 210-11 Farley Bldg.

Ala., Birmingham.—The Mutual Realty & Investment Co. incorporated; authorized capital, \$25,000, and principal office in Birmingham. Officers elected for the first year: J. D. Scruggs, president; E. E. May, vice-president; J. P. May, Jr., secretary and treasurer.

Ala., Birmingham.—The City Investment Co., capital \$150,000, is reported to have filed articles of incorporation. Officers—Robert Jemison, Jr., president; Robert Jemison, Sr., vice-president; A. B. Tanner, secretary-treasurer. The company will begin business with \$37,500 paid in.

Ala., Birmingham.—The Leonard Invest-

ment Co., authorized capital \$5000, is reported to have made application for a charter. Officers—C. E. Leonard, president and treasurer, and W. V. Trammell, secretary.

Ala., Newville.—The First National Bank has been chartered with \$25,000 capital by J. W. Whiddon, president; M. V. Capps, vice-president; J. W. Capps, cashier.

Ala., Opp.—A letter has been received denying that J. E. Henderson, president of the First National Bank of Opp, is interested in the organization of a loan and trust company there.

Ark., Dermott.—The Dermott Bank & Trust Co. is reported to have filed articles of incorporation; capital \$100,000.

Ark., Hamburg.—Official: The Farmers' Savings Bank & Trust Co. incorporated; capital \$50,000; J. J. Dean Frankenburg, Turner Butler, L. T. Murphy and J. M. Gardner, incorporators. Business is to begin February 13.

Ark., Siloam Springs.—The Bank of Commerce, capital \$25,000, is reported incorporated by J. H. Perry, president; Mayor George R. Fretwell, vice-president, and Bert R. Farmer, secretary and treasurer or cashier.

Fla., Apalachicola.—Reported that the American Exchange Bank has been organized with J. N. Combs, president; S. Brash and Frank R. Moody, vice-presidents, and F. R. Wakefield, cashier.

Fla., Branford.—The Branford State Bank of Branford, according to press dispatches, is chartered with \$15,000 capital, and business is expected to begin about March 1 with S. M. Martin, president; J. J. Dempsey, vice-president; Fred Phillips, cashier, and S. M. Martin, J. J. Dempsey, H. J. Heath, M. A. Best and A. Lee Humphreys, directors.

Fla., Ocala.—Official: The Ocala National Bank chartered; capital \$75,000; directors, John L. Edwards, president; Clarence Camp, vice-president; H. D. Stokes, cashier, and J. E. Chace, all of Ocala, and E. L. Wartmann of Citra. Business is to begin February 18.

Fla., Palatka.—The Atlantic & Gulf Insurance Co. is reported to have made application for a charter; capital \$100,000. Directors—G. Loper Bailey of Palatka, Fla., president; Edwin S. Thomlinson of Charleston, S. C., vice-president; E. N. Calhoun of Palatka, Fla., secretary and treasurer.

Ga., Atlanta.—Press dispatches report that at a meeting at the Chamber of Commerce steps were taken to organize a loan company with \$50,000 capital. Hollins N. Randolph and W. Woods White are said to be interested.

Ga., Atlanta.—The Travelers' Bank of Atlanta, capital \$200,000, is reported being organized by James L. Mayson and W. A. Fuller.

Ga., Macon.—A new casualty insurance company is reported being organized with \$250,000 capital. Among those said to be interested are R. J. Taylor, C. B. Lewis, J. F. Heard, L. P. Hillyer, A. Block and N. M. Block. It is understood that T. J. Gamble will be fiscal agent.

Ga., McDonough.—The Farmers and Merchants' Bank of McDonough, capital \$30,000, is reported to have made application for a charter. Incorporators—H. J. Turner, D. J. Green, W. D. Tarpley, C. C. Fargason, D. C. Turner, W. J. Turner, W. W. Turner and W. R. Green.

Ga., Waynesboro.—The Waynesboro Savings Bank is reported being organized with \$25,000 capital. Prominent business men are said to be interested.

Ga., Waynesboro.—The People's Savings Bank, capital \$25,000, is reported organized with W. M. Fulcher president, John L. Boyd vice-president, Henry W. Blount cashier. The directors are John L. Boyd, J. A. Blount, J. R. Palmer, W. M. Fulcher, Gray Quinney and Thomas F. Buxton.

Ky., Louisville.—Official: The Grayson County State Bank, which succeeds the Grayson County National Bank, has been chartered under State laws; capital \$25,000; R. J. Bassett, president; E. B. Tilford, vice-president; A. P. Stone, cashier; P. T. Parsons, assistant cashier; directors, E. B. Tilford, J. W. Moorman, S. W. Parsons, W. Payton, C. T. Cullings, A. C. Stone and W. S. Thomas. Business began February 1.

La., New Orleans.—Press dispatches state that the Citizens' Bank & Trust Co., which succeeds the Citizens' Bank of Louisiana, has begun business with \$400,000 capital and \$100,000 surplus; directors, G. W. Nott, Simon Pfeiffer, Frank Vatter, A. A. Lelong, Chas. J. Theard, Johnston Armstrong, Peter Torre, H. T. Cottam, D. W. Pipes, John W. Phillips, Jules M. Burgulieres, Hunter C. Leake,

A. J. Stallings, John Meyer and Henry Worner.

La., New Iberia.—A new State bank, capitalized at \$50,000, is reported being organized. Business is expected to begin about March 1.

Md., Baltimore.—The Mt. Vernon Permanent Building Association incorporated; capital \$250,000; incorporators, Frank M. Fisher, J. Henry Baker and Charles E. Orth.

Md., Baltimore.—The Mutual Home and Savings Association of Baltimore City incorporated; capital \$1,300,000; incorporators, Geo. R. Knott, Henry J. Krung, S. C. Mann, John P. Donovan, R. A. G. Wacker, Thomas Roach and Edw. P. Crummer.

Md., Baltimore.—The Atlas Savings and Loan Association (a building and homestead association) incorporated; capital \$100,000; William A. Schmidt, Charles J. Wittler and M. A. Schmidt, incorporators.

Miss., Vicksburg.—Official: The Casualty Insurance Co. of the South chartered under laws of Mississippi to conduct all lines of insurance except fire and life; capital \$50,000; surplus \$20,000. Directors: E. L. Brien, president; H. B. Smith, secretary; K. M. Brough, treasurer; R. D. Betts, S. P. Karpe. The directors and five others are the incorporators. A fiscal agent has been appointed and he is now engaged in placing the stock. While the company is organized, under the laws of Mississippi it cannot write any business until the entire capital is paid in in cash, within one year from January 17, 1911.

Miss., Wheelers.—Official: The Wheeler Bank Co. incorporated; capital \$10,000; L. C. Prather, president; D. L. Prichard, vice-president, and H. P. Elder, cashier; directors: J. H. Wall's, W. H. Grisham, H. C. Michaels and S. T. Smith of Wheelers, Miss., and L. C. Prather of Baldwin, Miss. Business is to begin March 1, 1911.

Mo., Chaffee.—The First National Bank, capital \$25,000, has been organized with F. W. Lay, president; J. C. Wylie, vice-president; E. A. Reissau, cashier. This bank is a conversion of the Chaffee State Bank.

Mo., Mt. Washington.—The Commerce State Bank is reported to have begun business with A. J. Ream, president, and G. R. Baker, cashier.

Mo., Seymour.—Reported chartered: People's National Bank; capital \$25,000.

Mo., Tipton.—Official: The Tipton Building and Loan Association incorporated and chartered; capital \$100,000; Harry E. Moore, president, and Ray Finley, secretary-treasurer. Business is to begin about March 24.

N. C., Waco.—The People's Bank is reported chartered with \$15,000 capital; stockholders, W. V. Smith, A. W. Black and others.

N. C., Wilkesboro.—Official: The Wilkes Realty & Insurance Co. incorporated; authorized capital, \$25,000; paid up, \$2,000; C. M. Sheets, president; W. G. Hall, vice-president and manager, and C. H. Ferguson, secretary and treasurer. Business began February 6.

Okla., Ashland.—Chartered: The Bank of Ashland; capital stock, \$10,000. The directors are R. P. Bremer, McAlester; Charles Hind, McAlester, and J. B. Patterson, L. O. Pickens, Tom Lankford, R. H. Hall, H. G. Rowley and A. Scringous, all of Ashland, Okla.

Okla., Guymon.—Chartered: The Beaver County Bank of Guymon; capital \$25,000. The directors are E. T. Guymon, Hutchinson, Kans.; Charles Summers, Liberal, Kans., and E. C. Summers, R. R. Quinn, J. H. Lott, G. E. Ellison and I. E. Cameron, all of Guymon, Okla.

Okla., Haworth.—Official: The Bank of Haworth incorporated; capital \$10,000. Directors—Dr. W. H. McBrayer, president; A. M. Hoffman, cashier; W. J. Whitman, first vice-president; Wm. Spencer, second vice-president; V. J. Fuller, A. E. Johns and C. Gamble. Business begins February 15.

Okla., Tulsa.—A night and day bank, capitalized at \$50,000, is reported being organized. Offices will be in the new Brady Hotel.

S. C., Charleston.—The Granite Building & Loan Association is reported chartered with \$150,000 capital. Officers—R. G. Rheit, president; G. B. Buell, vice-president, and T. T. Hyde, secretary and treasurer.

S. C., Greenville.—The Southern Leasehold & Trust Co. is reported to have been granted a commission; capital \$25,000. Petitioners—Perry Beattie, N. C. Poe, Jr., S. A. Moore and W. F. Symmes.

S. C., Heath Springs.—Official: The People's Bank of Heath Springs has begun business; capital \$25,000; Robert S. Floyd, president, Kershaw, S. C.; R. F. D. 2; E. F. Horton, vice-president, and H. F. Clyburn, cashier; finance committee, L. R. Rollings, Louis Condon and Dr. W. C. Tevilly.

S. C., Blacksburg.—The People's Bank of

Blacksburg, capital \$10,000, is reported to have organized with W. E. Anderson, president; T. M. Caldwell, vice-president, and H. P. Dew, cashier; directors, W. E. Anderson, H. P. Dew, Charles Baber, J. F. Belue, T. M. and James M. Caldwell.

S. C., Furman.—The Farmers and Merchants' Bank, chartered and incorporated, began business September 6, 1910, with J. F. Causey, Jr., president; A. E. Fripp, vice-president, and W. P. Ellis, cashier. The bank has \$15,000 capital. Error was made in publishing application for its charter. Commission was granted April 20, 1910; application for charter was made February 1, 1911.

S. C., Manning.—The People's Bank, capital \$25,000, is reported organized with directors thus: W. C. Davis, president; A. C. Bradham, S. Oliver Obryan, W. C. Davis, John D. Gerald, J. H. Rigby and L. H. Harvin.

S. C., Meggett.—The Bank of Meggett is reported to have been granted a commission; capital \$500. Petitioners, J. E. Harvey, J. N. Nathan, both of Charleston.

S. C., Smoaks.—The Smoaks Banking Co. is reported chartered; capital \$10,000; officers: J. E. Smoaks, president; F. J. Berry, vice-president, and I. A. Sauls, secretary and treasurer.

Tenn., Chattanooga.—Chas. B. Eddy, 68 William St., New York, writes that nothing is as yet decided regarding organization of a trust company in Chattanooga, as far as he is concerned. C. E. James of Chattanooga, reported associated with Mr. Eddy, also writes that nothing definite has been decided regarding trust company.

Tex., Ark.—A State bank, capitalized at \$12,000, is reported organized with directors thus: J. D. Allen, president; H. A. Pace, vice-president; W. H. Fredericks, W. E. Wilson, Thad Ray, D. P. Jarvis, M. M. Joyner; cashier not yet elected.

Tex., Benton.—The Scott County Abstract Co. is reported incorporated with \$500 capital by W. H. Stubblefield, H. D. Rogers and Harold Stubblefield.

Tex., Ben Wheeler.—The First State Bank of Ben Wheeler is reported incorporated with \$10,000 capital by W. J. Staton, O. O. Morris and H. A. Castleberry.

Tex., Como.—The First National Bank of Como, Tex., is reported chartered with \$10,000 capital.

Tex., Coupland.—Official: The Coupland State Bank chartered; capital \$10,000; surplus \$500. Business began February 6 with C. W. Pfinger, president; A. M. Pfinger, vice-president, and H. G. Lehman, cashier.

Tex., Dallas.—Official: The Bonding & Casualty Insurance Co. of Dallas has begun business.

Tex., Dallas.—A building and loan association is reported organized with M. L. Cornwell, president; A. R. Holland and R. S. Lewis, vice-presidents; F. O. Davis, secretary and treasurer; E. Lee Wilson, G. W. Dettler, J. R. Lewis, P. D. Summey and Dr. S. A. Wilkins, directors. Application for a charter will be made at once and the first series of stock will probably be opened about March 1.

Tex., El Paso.—The Two Republics Fire Insurance Co. of El Paso is reported chartered; capital \$150,000. Officers: A. Krakauer, president; E. E. Perrelet, vice-president; L. D. Prewitt, secretary, and W. Cooley, treasurer.

Tex., Jasepr.—The Jasepr State Bank, capital \$15,000, is reported chartered. Incorporators: C. C. Brown, J. T. Howell, R. M. Curtis and others.

Tex., Hillsboro.—Official: The Hill County State Bank has begun business; Thos. Ivy and others interested.

Tex., Lockhart.—Official: Flowers-McDowell Abstract Co. chartered and incorporated; capital \$250. M. O. Flowers, president; G. W. Walton, vice-president; J. E. McDowell, secretary and treasurer. Business has begun.

Tex., Palestine.—Official: The Guaranty State Bank of Palestine chartered; capital \$100,000; directors, T. M. Campbell, J. E. Angly, W. B. Flanagan, G. E. Dilly, J. R. Cook, P. W. Ezell and Eugene Fore. Business is to begin about March 20.

Tex., Sherman.—The American Bank & Trust Co. is reported incorporated with \$100,000 capital by T. U. Cole, C. B. Dorchester, T. D. Joiner, Tom Randolph, W. C. Eubank, J. L. Randolph, C. B. Bryant, D. S. Thompson, F. A. Batsell and P. R. Markham.

Tex., Texas City.—The Guaranty State Bank, capital \$15,000, is reported incorporated by J. H. W. Steele, F. N. Danforth, R. M. Coats, F. B. Steele and William Moore.

Tex., Vernon.—The First Guaranty State Bank, capital \$50,000, is reported incorporated by W. T. Waggoner, P. L. Green and J.

H. Knichloe, E. P. Hicks, R. L. More, J. H. Pendleton, A. C. Boger, T. L. Pierce and E. M. Gittis.

Tex., Waco.—Official: The Farmers & Merchants' State Bank chartered; capital \$100,000. Incorporators: M. L. Garrett, W. W. Lastinger, George H. Bird and J. C. Halloman. Business is to begin March 1.

Tex., Wichita Falls.—Official: The Wichita Southern Life Insurance Co. is to be incorporated with an authorized capital of \$300,000 and surplus of \$300,000; incorporators, J. A. Kemp, president, City National Bank; W. M. McGregor, cashier, First National Bank; P. P. Langford, vice-president, City National Bank, and Frank Kell, banker and capitalist.

Va., Gate City.—Official: The Farmers' Protective Insurance Co. of Scott county chartered. Directors, John Hart and W. D. Gardner of Arcadia, Tenn., and A. T. Henderson of Hiltons, Va. Company will meet to organize February 18.

NEW SECURITIES.

Ala., Florence.—\$15,000 of bonds are reported voted for the State Normal College.

Ala., Thomasville.—Official: L. M. Trovick, Mayor, may be addressed regarding \$8000 of 5 per cent. 20-year school building bonds voted April, 1910. Denomination \$1000.

Ark., Snyder.—Reported voted: \$40,000 of water and electric-light extension bonds.

Fla., Delray.—Reported voted: \$10,000 of school-building bonds.

Fla., Jacksonville.—Bids will be received until 3 P. M. March 6 by W. M. Postwick, Jr., chairman Board of Bond Trustees, for \$100,000 of 5 per cent. improvement bonds; denomination \$1000; dated October 1, 1910; maturity October 1, 1936.

Ga., Griffin.—Bids were received until noon February 16 for \$80,000 of 5 per cent. Spalding county courthouse bonds. W. E. H. Searcy, Jr., is clerk and H. V. Kell chairman Commissioners of Roads and Revenues.

Ga., Sparta.—Official: Reported that \$40,000 of 5 per cent. water-works bonds have been purchased by J. H. Hilsman & Co. of Atlanta at 101.

Ky., Harrodsburg.—Reported that Mercer county will vote next election day on issuing \$40,000 of courthouse bonds.

Ky., Winchester.—The \$40,000 of 4½ per cent. 20-year city-hall construction bonds are reported to have been purchased by the Harris Trust and Savings Bank of Chicago at par.

Ky., Winchester.—The Harris Trust and Savings Bank of Chicago is reported to have been awarded \$40,000 of 4½ per cent. 20-year city hall bonds.

La., Kentwood.—Official: Duke M. Farson, Chicago, Ill., purchased the \$30,000 of 5 per cent. bonds for erection and equipment of school building; denomination: 57 of \$500 and 15 of \$100; dated August 1, 1910; maturity August 1, 1912. W. D. Welsh is Mayor.

La., Pineville.—Official: All bids received February 7 for the \$9000 of 5 per cent. bonds were rejected. J. E. Walker is Mayor.

La., Shreveport.—An official letter confirms report that it is proposed to issue bonds. J. H. Eastham is Mayor and L. H. Baker Secretary and Treasurer.

La., Slidell.—Reported voted: \$20,000 of 5 per cent. 25-year schoolhouse bonds.

Md., Annapolis.—Official: June 21 city voted \$20,000 of 4 per cent. permanent-improvement bonds; dated February 10, 1910; maturity July 1, 1918; denomination \$1000. February 10 Annapolis Banking & Trust Co. purchased \$4000; other series not sold. Phil E. Porter is City Clerk.

Md., Baltimore.—The Finance Commission has decided to sell \$1,000,000 of city stock at public sale after March 1. The stock includes \$500,000 of school loan, \$200,000 of dock loan, \$100,000 of Jones Falls loan and \$200,000 of conduit loan.

Miss., Ellisville.—Official: Bids will be received until March 6 by J. T. Taylor, Mayor, for \$10,000 of 5 per cent. 20-year school bonds; dated March 10, 1911; denomination \$500.

Miss., Greenville.—Southern & Co. of Kansas City are reported to have purchased \$100,000 of Washington county courthouse and jail bonds. The bonds take up an equal amount issued twenty years ago.

Miss., Greenwood.—The Capital National Bank of Jackson is reported to have been awarded \$60,000 of 5 per cent. 30-year Leflore county bridge bonds at 103.

Miss., Hattiesburg.—The City Council is reported to have been requested to issue \$30,000 of school bonds.

Miss., Hazlehurst.—Press dispatches state that the \$75,000 of 5 per cent. bonds of Beat 1, Copiah county, have been awarded at par as

follows: Crystal Springs Bank, \$25,000; Bank of Hazlehurst, \$25,000; Merchants and Planters' Bank of Hazlehurst, \$10,000; Bank of Wesson, \$25,000.

Miss., Mendenhall.—Dr. Saunders of Laurel, Miss., is reported to have purchased \$8000 of municipal bonds for erection of agricultural high school.

Miss., Mendenhall.—Simpson county is reported to have sold \$40,000 of 5 per cent. 20-year road bonds. Address Board of Supervisors.

Miss., Senatobia.—H. I. Gill, Town Clerk, is offering for sale \$3000 of 5 per cent. 20-year light and water bonds.

Mo., Carrollton.—The Wm. R. Compton Company of St. Louis are reported to have been awarded \$50,000 of 4 per cent. school district building bonds.

Mo., Charleston.—E. J. Deal is reported to have been awarded at a premium of \$1150 the \$25,000 of 6 per cent. Mississippi county drainage bonds.

Mo., Monett.—Official: The Mercantile Trust Co., St. Louis, purchased at par and \$20 premium and accrued interest on delivery the \$35,000 of 5 per cent. electric-light-construction bonds. Perry Short is Mayor.

Mo., St. Louis.—An official letter says that city has not decided upon the issuing of any bonds at this date. B. J. Taussig is Comptroller.

Mo., Springfield.—Greene county contemplates, it is reported, the issuing of \$250,000 of courthouse-completion bonds.

N. C., Concord.—Reported that a bill is to be prepared authorizing Cabarrus county to issue \$105,000 of bonds with which to pay the present indebtedness of the county; bonds to be in denominations of \$500 and \$1000.

N. C., Durham.—Official: Representative in Legislature has been requested to introduce bill providing for an election to vote on \$50,000 of bonds for additional school building; matter to be submitted within the next two years if it be necessary to have the funds. W. D. Carmichael is superintendent.

N. C., Edenton.—Official: City proposes to issue \$20,000 of 5 per cent. sewerage bonds. There will be no election; bonds to be authorized by Legislature. W. J. Berryman is Town Clerk.

N. C., Morehead City.—Official: Bids will be received until 8 o'clock March 6 for \$20,000 of 5½ per cent. 30-year water-works bonds; denomination \$500. W. J. Hales, secretary and treasurer.

N. C., Rockingham.—Official: Bids will be received until noon March 13 for \$15,000 of Richmond county bonds, interest not exceeding 6 per cent. Address B. F. Reynolds, clerk Board of County Commissioners.

N. C., Maxton.—The question of issuing \$25,000 of street-improvement bonds is reported under consideration.

N. C., Pittsboro.—March 11, it is stated, vote will be taken on \$5000 of street-improvement bonds.

N. C., Robbinsville.—An election was called in Graham county February 14. It is reported, to vote on \$50,000 of 5 per cent. 20-year railroad aid bonds, but result is not yet received.

N. C., Salisbury.—Reported that an election is to be held March 14 to vote on \$100,000 of bonds in aid of proposed railroad from Salisbury to Monroe. It is said that other towns along the route will hold elections for the same purpose.

N. C., Winston-Salem.—Official: March 14 an election is to be held to vote on \$100,000 of 30-year refunding bonds; interest not to exceed 5 per cent.; dated May 1, 1911; maturity May 1, 1941; denomination \$1000; O. B. Eaton is Mayor.

Okla., Ada.—Official: Sutherland & Co. of Kansas City, Mo., purchased at 95 the \$150,000 of water-works-extension bonds. W. B. Jones is City Clerk.

Okla., Chandler.—Press dispatches state that \$900,000 of Deep Fork Drainage bonds (Lincoln county) are still on sale.

Okla., Checotah.—Official: John H. Mosier and A. J. McMahon purchased on January 15 the \$40,000 of 5 per cent. 25-year sewer-system bonds; denomination \$1000. Ben F. La Fayette is Mayor.

Okla., Hugo.—Sutherland & Co. of Kansas City are reported to have been awarded \$125,000 of courthouse and jail and \$125,000 of bridge bonds of Choctaw county. The election will likely be held in May.

Okla., Kiowa.—Official: C. A. Reese, Muskogee, Okla., on January 9 purchased \$18,000 of 6 per cent. 30-year water and light bonds;

[For Additional Financial News, See Page 82.]

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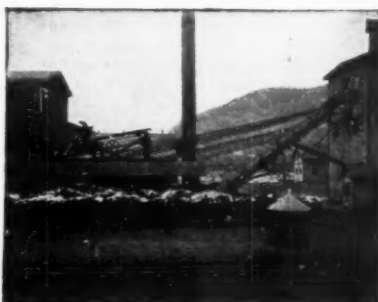
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denomination \$1000; dated February 9, 1911; maturity February 9, 1941. W. N. Verner is president of the board.

Okla., Lamont.—Reported voted: \$20,000 of 6 per cent. 25-year water-works bonds.

Okla., Leflore.—Reported that \$50,000 of 6 per cent. 25-year funding bonds have been purchased by Geo. I. Gilbert of Oklahoma City.

Okla., Muskogee.—Official: February 16 an election was to be held to vote on \$390,000 of water-works extension and improvement, \$25,000 of sewer and \$35,000 of garbage disposal plant bonds. A. F. McGarr is Mayor. Result not yet reported.

Okla., Snyder.—Official: February 7 city voted \$40,000 of 6 per cent. 20-year light and water extension bonds; denomination \$1000. Address J. F. Kimbrough, Town Clerk.

Okla., Tulsa.—Reported that an election will soon be held to vote on \$100,000 of city hall bonds.

S. C., Columbia.—An election is to be held in Richland county March 14, it is reported, to vote on bridge bonds not exceeding \$75,000, interest not to exceed 6 per cent. Walter C. Thomas is County Clerk.

S. C., Columbia.—Official: Townsend Scott & Son and Wallace & Co., Baltimore, Md., were awarded at \$103.57 the \$50,000 of 5 per cent. 30-year bonds issued to refund old debt; denomination \$1000; dated March 1, 1911; maturity March 1, 1941. R. W. Shand is superintendent of finance, and W. H. Gibbs, Mayor.

S. C., Greenville.—J. P. Goodwin, County Supervisor, writes that an election will be held some time this summer to vote bonds for Greenville county courthouse. Nothing doing at present.

S. C., Rock Hill.—Official: City will offer for sale within the next 30 or 60 days \$285,000 of 5 per cent. 40-year sewerage, water-works and electric-light bonds.

S. C., Spartanburg.—Official: A bill is now before State Legislature to allow the citizens to vote on \$90,000 of bonds for paying off floating debt of city. J. B. Carlisle is clerk and treasurer.

S. C., St. George.—Reported that steps have been taken to issue \$17,000 of water-works and electric-light bonds.

S. C., Sumter.—Reported that an election is soon to be held to vote on \$35,000 of bonds for paving driveways of principal streets.

Tenn., Arlington.—Reported that a bill is to be introduced in the Legislature providing for \$3000 of water-plant bonds. W. A. Taylor is Mayor.

Tenn., Dyer.—Application is reported to have been made to the Legislature for authority to issue water-works bonds.

Tenn., Johnson City.—The Union Savings Bank & Trust Co. of Cincinnati is reported to have purchased \$40,000 of 5½ per cent. 20-year refunding bonds.

Tenn., Jonesboro.—Steps are reported being taken to issue \$25,000 of bonds to build a street-car line to Johnson City, Tenn. H. C. Beauchamp is president Board of Trade.

Tenn., Johnson City.—Official: The Union Savings Bank & Trust Co., Cincinnati, O., purchased at private sale January 12 the \$40,000 of 5½ per cent. 20-year refunding maturing bonds; denomination \$500; dated February 1, 1911; maturity February 1, 1931.

Tenn., Kenton.—Reported that application has been made to the Legislature for authority to issue bonds for water-works.

Tenn., Memphis.—According to press dispatches, a bill is to be introduced in the Legislature authorizing an issue of \$750,000 of bonds, \$250,000 being for subway construction and the balance for street paving. E. H. Crump is Mayor.

Tenn., Memphis.—Bids will be received until 2.30 P. M. March 4 for \$100,000 of bonds for improvement and extension of water plant, same being part of \$3,000,000 authorized in 1903. Denomination \$1000. Dated May 1, 1903; maturity \$50,000, May 1, 1932; \$50,000, May 1, 1933. Enn's M. Douglass, City Clerk.

Tenn., Newport.—Reported that it is proposed to issue \$50,000 of waterworks and sewer bonds.

Tex., Austin.—The State Board of Education has purchased the following securities at par and accrued interest: Florence Independent school district, \$13,000 5 per cent. schoolhouse bonds; Grayson county common school district No. 91, \$1500 5 per cent. schoolhouse bonds; Hansford county \$1000 5 per cent. common school district No. 7 schoolhouse bonds; \$800 common school district No. 42 and \$1000 common school district No. 46 schoolhouse 5 per cent. bonds of Fisher county; Putnam Independent school dis-

trict, \$9000 5 per cent. schoolhouse bonds; Taylor county common school district No. 19, \$8000 5 per cent. schoolhouse bonds; Conroe Independent school district, \$25,000 5 per cent. schoolhouse bonds; Andrew county common school district No. 1, \$5000 5 per cent. schoolhouse bonds; \$1000 of district No. 1, \$1000 of district No. 37 and \$4000 of district No. 21 5 per cent. schoolhouse bonds of Wood county; \$27,500 city of Jacksboro 5 per cent. water-works bonds at 97 per cent. of par value and accrued interest.

Tex., Austin.—The Attorney-General has approved securities as follows: \$30,000 of 5 per cent. 10-40-year bonds of Mitchell County Road District No. 1; \$1500 of 5 per cent. 10-15-year bonds of Collin county common school district No. 84; \$6000 of 5 per cent. 40-year Leckville Independent school district bonds; \$10,000 of 5 per cent. 20-40-year Alvin street-improvement bonds; \$1500 of 5 per cent. 10-15-year Celina county common school district No. 84 building bonds.

Tex., Bastrop.—Reported that the Bastrop Commercial Club is taking steps for holding an election to vote on \$75,000 of bonds for improving roads in Bastrop county.

Tex., Belton.—The First State Bank of Belton is reported to have purchased at par \$11,000 of additional water-works bonds.

Tex., Brady.—March 25, it is stated, an election is to be held to vote on \$40,000 of water-supply bonds.

Tex., Brady.—Reported that an election is to be held to vote on \$40,000 of bonds for constructing dams and reservoirs on Brady Creek.

Tex., Brownsville.—An election is to be held March 14, it is reported, to vote on \$80,000 of street-paving, \$35,000 of water-system, \$15,000 of electric-light-system improvement, \$12,000 of market-place improvement and city hall, and \$3000 of slaughter-house bonds.

Tex., Caldwell.—Official: March 7 an election is to be held to vote on \$6000 of 5 per cent. 40-year water-works-improvement bonds; denomination \$500. I. A. Gray is Mayor and W. H. Hundley, secretary.

Tex., Denton.—Reported that \$2500 of city scrip is to be issued, proceeds to be used for sewerage connection.

Tex., Denison.—Bids will be received until 8 P. M. February 23 by J. D. Yocum, City Secretary, for \$50,000 of 5 per cent. water-works improvement bonds; denomination \$500.

Tex., Iredell.—School bonds amounting to \$7000 of 5 per cent. bonds are reported sold.

Tex., Floresville.—H. N. Swain of Dallas is reported to have been awarded \$8500 of 5 per cent. 20-year bonds of Wilson county common school district No. 11.

Tex., Galveston.—Press dispatches state that the Texas Bank & Trust Co. of Galveston has agreed to take for a commission of \$20,000 the entire issue of \$500,000 of Galveston county road bonds.

Tex., Grapeland.—Reported voted: Road bonds.

Tex., Groesbeck.—Official: Limestone county, Texas, has purchased \$25,000 of 5 per cent. 5-40-year independent school district bonds; denomination \$500.

Tex., Lampasas.—Official: J. E. Morgan, County Clerk, writes: "No bonds issued of late date; none contemplated." This denies report that Lampasas county proposes to issue bridge bonds.

Tex., Olney.—Reported voted: \$10,000 of water-works bonds.

Tex., Silvertown.—Official: January 21 school district No. 1, Briscoe county, voted \$35,000 of 5 per cent. 40-year school bonds; denomination \$100; dated April 10, 1911; maturity April 10, 1951. Trustees, H. C. Seaman; J. A. Bain, secretary, and K. E. Bain.

Tex., Terrell.—Official: Bids will be received until March 1 by S. M. N. Marrs for \$3000 of 5 per cent. 40-year schoolhouse-improvement bonds; denomination \$500; dated January 1, 1911; maturity January 1, 1951.

Tex., Teague.—Reports state that the Farmers and Merchants' State Bank of Teague has purchased \$6000 of water-works bonds at par.

Tex., Petty.—Official: An election is to be held to vote on \$12,000 of 5 per cent. 4-10-year independent school district bonds. Denomination \$500.

Tex., Port Neches.—Reported voted: \$30,000 of bonds of School Precinct No. 7.

Tex., Vernon.—Official: November 1, 1910, Sutherland & Co., Kansas City, Mo., purchased \$9000 of water-works extension and \$3000 of sewer extension 5 per cent. 10-40-year bonds. Denomination \$500.

Tex., Waxahachie.—An election is to be held March 11, it is reported, to vote on \$15,000 of school bonds.

Tex., Weatherford.—A Chicago bonding

company is reported to have been awarded, at par and accrued interest, \$15,000 of 5 per cent. 15-40-year city hall and fire-station bonds.

Va., Chase City.—Reported that the \$15,000 of 6 per cent. 20-year town bonds are still being offered. W. J. Gregory is City Clerk.

Va., Dinwiddie.—Official: W. N. Coler & Co. have purchased the entire issue of Dinwiddie county road-improvement bonds.

Va., Portsmouth.—Regarding the issuing of \$600,000 of water-works bonds, an official letter says that a vote of the people decided in favor of the issue, but that the time of issuing is entirely with the City Council, and may not be issued for months to come. L. P. Slater is City Clerk.

Va., Pulaski.—An official letter confirms report that \$70,000 of 5½ per cent. Pulaski county road-improvement bonds were purchased by Well, Roth & Co. of Cincinnati. Bonds were voted December 4, 1909; dated February 1, 1911; maturity \$10,000 in 10 years and \$15,000 every five years thereafter; denomination \$1000. Address Board of Supervisors.

Va., Smithfield.—L. C. Brock, Mayor, denies report that a bond election is to be held.

Va., Staunton.—Press dispatches state that a petition is being circulated in Augusta county requesting the Board of Supervisors to call an election to vote on the question of issuing macadam road bonds.

Va., Tazewell.—A letter to the Manufacturers Record says that a petition will probably be presented to the Circuit Court asking for a bond issue of \$500,000 for the permanent improvement of public roads in the county. Press dispatches say there are three magisterial districts in the county to be divided as follows: Clear Fork district, \$250,000; Jeffersonville district, \$200,000, and Maiden Spring district, \$150,000.

Va., Waverly.—Reported voted: \$7000 of street-improvement and electric-light bonds.

W. Va., Bluefield.—Official: An ordinance has been passed by the Town Council calling for an election to vote on \$45,000 of bonds for school building, water-works, street and sewerage improvement bonds. The election will be called some time after 30 days from February 20. V. L. Sexton is Mayor.

W. Va., Moundsville.—Reported that within about 15 days \$166,900 of sewer system construction bonds will be sold.

W. Va., Williamson.—Reported that Seasongood & Mayer of Cincinnati were awarded \$40,000 of 5 per cent. 10-20-year Mingo county courthouse-improvement bonds at 101.53.

W. Va., Welch.—Reported that \$30,000 of 10-20-year Elkhorn road district and \$50,000 of 20-30-year North Fork road district 5 per cent. bonds are still being offered. R. B. Bernheim is clerk of McDowell county.

At Morehead City, N. C., bids will be received until 8 o'clock March 6 for \$30,000 of 5½ per cent. 30-year water-works bonds. Further particulars will be found in the advertising columns.

At Rockingham, N. C., bids will be received until noon March 13 for \$15,000 of Richmond county bonds; interest not exceeding 6 per cent. Further particulars will be found in the advertising columns.

These Advertisements Too Late for Regular Alphabetical Index

Add 208 Dyal-Upchurch Bldg.	86
Blackmore, Ted.	86
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FINANCIAL NOTES.

Press dispatches state that the Bank of Western Carolina at Aiken, S. C., will start a branch at Jackson.

The Rio Grande Valley Bank & Trust Co. of El Paso, Tex., is reported to have absorbed the Guaranty Trust & Banking Co., with deposits amounting to \$300,000.

The executive council of the American Bankers' Association will, according to press dispatches, meet at Nashville, Tenn., May 1, 2 and 3. This will be the first meeting of the council in the South, and is said to be due to the recent election of President F. O. Watts of the First National Bank of Nashville to the presidency of the organization.

The State Savings Bank of Chattanooga, Tenn., is reported to have increased its capital from \$100,000 to \$300,000.

At the annual convention of the Alabama Bankers' Convention, held in Montgomery, Ala., January 18 and 19, the following officers were elected for the ensuing year: Frank S. Moody of Tuscaloosa, president; W. H. Manly of Birmingham, vice-president, and McLane Tilton, secretary and treasurer.

OFFICE OF THE NORTHERN CENTRAL RAILWAY COMPANY.

BALTIMORE, Md., 7th February, 1911. The Annual Meeting of the Stockholders of this Company will be held at 12 o'clock M. on Thursday, the 23rd day of February, 1911, at the General Office, southeast corner of Calvert and Centre Streets, Baltimore, when the Annual Report of the President and Board of Directors for 1910 will be presented, an election held for Twelve Directors to serve for the ensuing year, and such other business transacted as may properly come before the meeting.

LEWIS NEILSON, Secretary.

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